SCALING UP THE RESPONSE TO INFECTIOUS DISEASES

A WAY OUT OF POVERTY

REPORT ON INFECTIOUS DISEASES 2002

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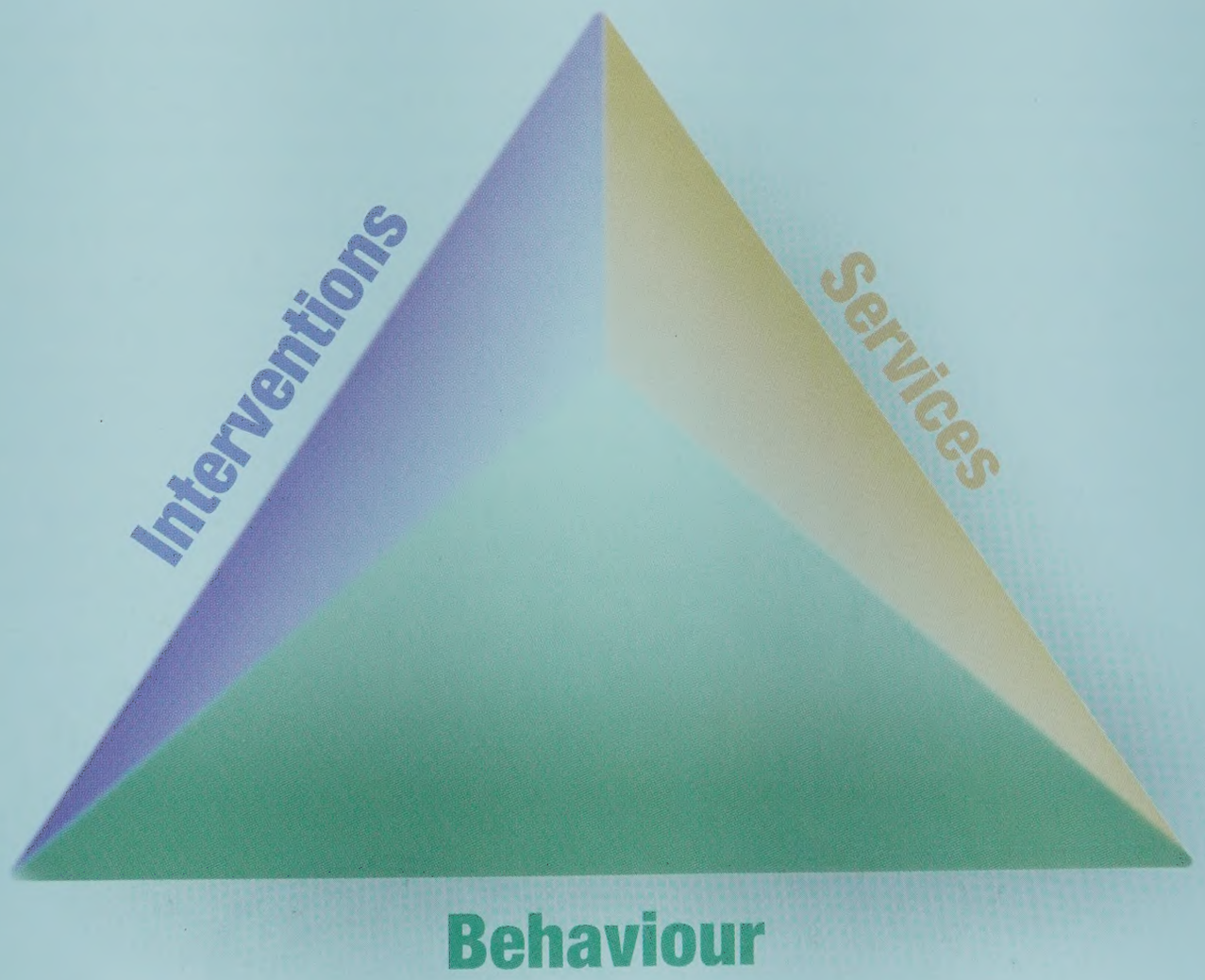
SCALING UP THE RESPONSE TO INFECTIOUS DISEASES



Investing in Health for Economic Development

In December 2001, the Commission on Macroeconomics and Health presented the results of its two-year work to the World Health Organization in a publication titled *Macroeconomics and Health: Investing in Health for Economic Development*. The Commissioners present a new global blueprint for health that is both compassionate and cost-effective. Millions of deaths occur each year in the developing world due to conditions which can be prevented or treated. The Commissioner's outline a plan of action to save millions of these lives every year at a small cost relative to the vast improvements in health and increased prosperity.

The Report shows that just a few conditions are responsible for a high proportion of the avoidable deaths in poor countries – and that well-targeted measures, using existing technologies, could save around 8 million lives per year and generate economic benefits of more than $360 billion per year, by 2015–2020. The aggregate cost of scaling up essential health interventions in low-income countries would be around $66 billion per year, with the costs roughly divided between high-income donor countries and low-income countries. Thus, the economic benefits would vastly outstrip the cost.

Scaling Up the Response to Infectious Diseases: A way Out of Poverty takes up the Commission's challenge. It outlines how increased investment in health can be well spent, stressing how interventions, health system strengthening and behaviour change together can help achieve the goals we are setting ourselves.

This report takes forward the Commission's action agenda. It will help decision makers see how we can turn increased investment in health into concrete results.

JEFFREY D. SACHS
Chair
Commission on Macroeconomics and Health

Introduction

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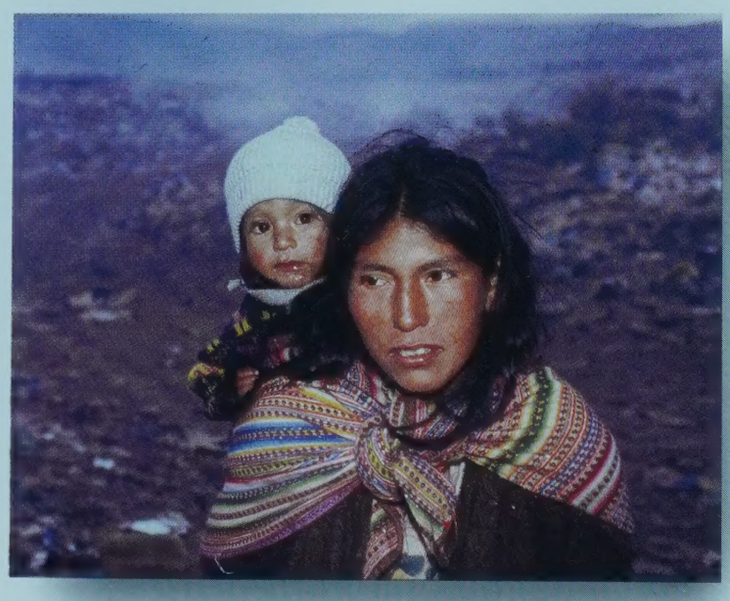
Chapter 2 • Health Services

Chapter 3 • Mobilizing for Healthy Behaviour



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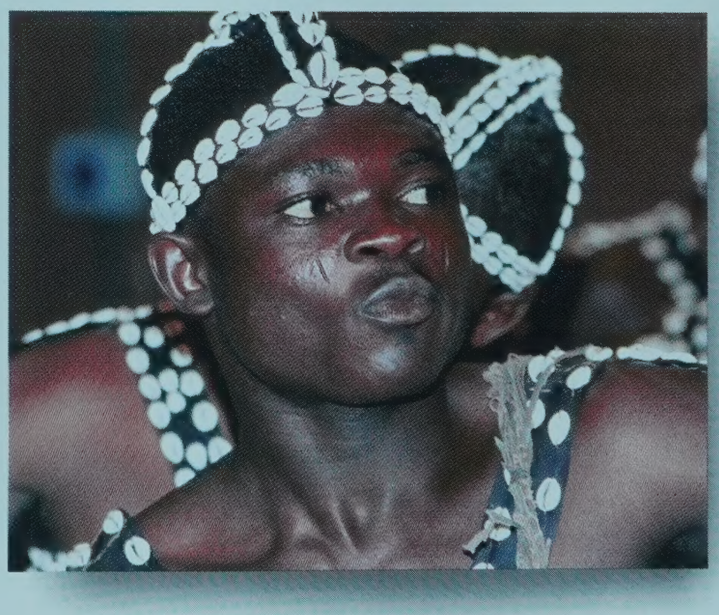


Conclusion • The Way Forward

INTRODUCTION

This report is intended to provide a basic "map" of existing initiatives against HIV/AIDS, TB and malaria. It is also intended to provide the broad outlines of a single "road map" to scaling up efforts to control these diseases.

Today, perhaps for the first time in history, it is possible to launch a truly global response to the major infectious diseases that keep people in poverty, focusing initially on HIV/AIDS, tuberculosis (TB) and malaria. While effective prevention and treatment strategies have long been available for controlling these diseases, political will and social support are materializing to help the world go to scale in fighting these deadly epidemics.

Together, HIV/AIDS, TB and malaria claimed 5.7 million lives last year, and caused debilitating illness in many millions more. These were the lives of infants, young children, and young mothers and fathers in their most productive years.

Yet the high death toll from these infectious diseases is only part of the story. Ongoing ill-health is one of the main reasons why the poor stay poor. Infections lead to poverty, and poverty leads to infections. For every person who died, many more still lived on, but were reduced to poverty, their health and their lives affected by frequent bouts of illness.

With existing health knowledge and technology, it is possible to prevent the great majority of these premature deaths and reduce the suffering of many millions of people. World leaders and international health officials agree that it is realistic to use currently available interventions and strategies to reduce TB and malaria deaths by 50% and cut HIV infections among young people by 25% within the next decade. With the disease burden lifted, the poor can also gain greater control over their own health and lives, and improve their capacity to raise themselves out of poverty.

The control of HIV/AIDS, TB and malaria will require multiplying manifold the availability of medicines and supplies. It will depend on mobilizing legions of trained and well-equipped health professionals and volunteers who can bring essential health services within easy reach of hundreds of millions of households. It will demand an unprecedented deployment of communications and marketing strategies

to encourage healthy preventive behaviour among more than a billion people at greatest risk.

Profiling the killers

At the beginning of 2001, more than 36 million people lived with HIV/AIDS worldwide – 50% more than were predicted a decade ago. About 14 million women of childbearing age are currently infected with HIV, the virus that causes AIDS, increasing the risk of children being born with HIV. Over 21 million people – including 4.3 million children – have already died of AIDS since the start of the epidemic, leaving behind a legacy of more than 13 million orphans.

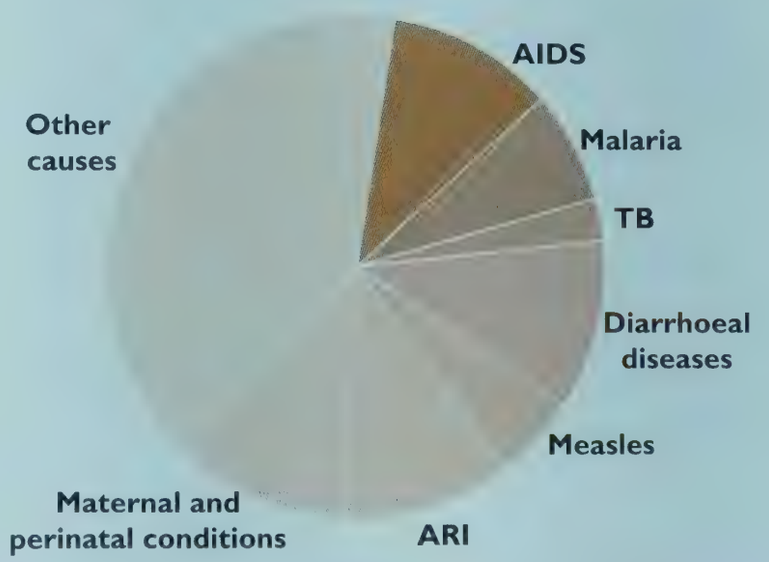
Ninety five percent of all HIV infections occur in developing countries, especially in sub-Saharan Africa, dramatically cutting life expectancy. In sub-Saharan Africa, HIV is deadlier even than war: in 1998, war killed 308 000 people in Africa, but AIDS killed more than 2 million. By the year 2020, unless there is a dramatic turn-around, AIDS will have caused more deaths than any other disease epidemic in history.

Two billion people worldwide are carriers of the tuberculosis bacillus, the germ that can lead to active TB. Every year, about 8.8 million people develop active TB and 1.7 million die of the disease; 99% of all TB sufferers live in developing countries. Most are poor people aged between 15 and 54 years. Between 2000 and 2020, nearly 1 billion additional people will be newly infected with TB, 200 million people will become sick, and 35 million will die of the disease, unless current efforts to control TB are greatly strengthened and expanded.

Because of their suppressed immune systems, people co-infected with HIV and TB are many times more likely to develop active TB. In several African countries, the number of TB cases has doubled or even trebled in the past decade, mainly as a result of the HIV epidemic. The number of peo-

The biggest killers of the poor

The majority of deaths among children and young adults (ages 0-44) in Africa and Southeast Asia are due to seven causes



Source: WHO/CDS

ple co-infected with TB and HIV has already soared to over 10 million.

Malaria kills more than 1 million people a year – 3 000 deaths a day. Hundreds of millions of people – most of them children and pregnant women in sub-Saharan Africa – suffer acute attacks of malaria-induced fever, often several times a year.

Children are the main victims of malaria. During the year 2000, 906 000 children under the age of five succumbed to the disease. Malaria often acts together with malnutrition, respiratory infections and other diseases that prey upon the most vulnerable. Although insecticide-treated nets offer children a very high level of protection against malaria, less than 5% of those at risk sleep safely under them.

Women are also at particular risk. In malaria-endemic countries, pregnant women are at a much higher risk of contracting malaria. Malaria infection during pregnancy may cause maternal anaemia and lead to an increased risk of maternal death. Malaria in pregnancy also increases the risk of miscarriage and stillbirth. Babies born to mothers with malaria often have low birth weight, which adversely affects the health and development of the young child.

HIV/AIDS, tuberculosis and malaria – the basic facts, 2000

Disease	Deaths per year	New cases per year	Percentage in developing countries
HIV/AIDS	3 million	5.3 million	92%
Tuberculosis	1.9 million	8.8 million	84%
Malaria	More than 1 million	300 million	nearly 100%

A beachhead against poverty and disease

The time is now come to mount a campaign against these three diseases and the unacceptable burden of death and suffering which they cause. We have the tools, but they are inadequately distributed. The benefits of ensuring success in this massive effort to scale up against diseases of poverty far outweigh the costs of their control.

Firstly, by targeting these diseases, we can **give direct help to the most vulnerable**, particularly the poor, the young and the weak. For many millions of people, especially the 1.2 billion people worldwide living in absolute poverty, poor health is a constant threat to survival. Those most vulnera

ble to infectious diseases are infants and children below the age of 5; pregnant women and young mothers; and people in what should be their most productive – and reproductive years, – whose health is endangered by infections, malnutrition, weakened immune systems and environmental factors beyond their control.

Secondly, by controlling AIDS, TB and malaria, we can **remove significant obstacles that keep people in poverty**. Through recurrent bouts of illness, these diseases prevent adults from working and hence reduce the income and food available to families. Moreover, since deaths due to AIDS and TB occur mainly among young adults with dependent children, these diseases are creating a generation of orphans growing up in deprivation, lacking parental support and guidance, unable to complete even primary school and virtually condemned to a life of poverty.

These diseases also increase the cost of health care to poor families. Because of its chronic nature, HIV/AIDS is a particularly heavy drain on family finances: whenever a family member falls sick with an HIV-related illness, spending on medical treatment, drugs and traditional remedies rises dramatically. When cash runs out, precious assets such as cattle, land, bicycles and furniture are sold to pay medical bills. AIDS drives average households into poverty and condemns the poor to inescapable destitution.

Because TB also targets people in their most productive years (15-54), its economic impact on families is equally devastating. Approximately 20% - 30% of annual income may be lost if the household's breadwinner is struck down with active TB; and the income of 15 years will be lost if this person dies. Globally, the economic costs of TB to the poor are estimated to be US$ 12 billion per year.

Thirdly, by controlling HIV/AIDS, TB and malaria, we can **prevent families from falling into poverty and decrease business costs** incurred through increased absenteeism, higher recruitment and training costs, and greater expenditure on medical care for employees. These

diseases significantly cut into the productivity of private firms and state enterprises, slowing national economic development. Likewise, infectious diseases contribute to unhealthy market conditions where people have less income as breadwinners no longer are able to support their families as a result of illness and death.

The economic fall-out from the AIDS epidemic is enormous, especially in sub-Saharan Africa. Agricultural production is being hit particularly hard. A sugar estate in Kenya, for example, reported a 50% drop in productivity between 1995 and 1997, combined with higher overtime payments for workers filling in for sick colleagues. Subsistence agriculture is also affected: a study in north-western United Republic of Tanzania found that a woman with a sick husband spent 60% less time on agricultural activities than normal. In Zimbabwe, maize production on communal farms fell by 54% between 1992 and 1997 because of illness and death as a result of AIDS.

Malaria has slowed economic growth in African countries possibly by up to 1.3% per year. Owing to the compounded effects of malaria over the past 35 years, Africa's overall gross domesic product (GDP) is estimated to be 32% lower, equivalent to a loss of US$ 100 billion annually.

Fourthly, we can **stop losing further ground against drug-resistance**, which threatens to undermine our limited armory of low-cost drugs for the effective treatment of TB and malaria. In many parts of the world, current malaria treatments are losing – or have already lost – their potency owing to the increasing prevalence of drug-resistant parasites, and new treatments for malaria may be priced out of reach of the most needy. We still have a window of opportunity to make much progress against these diseases with existing drugs. But if we fail to make wide and efficient use of these medicines now, they are likely to slip through our grasp due to growing resistance.

Drug-resistant TB is on the rise, greatly increasing the cost of treatment. Multidrug-resistant (MDR) TB has already

been identified in over 100 countries and experts predict that more than 400 000 new cases of MDR-TB will develop each year. These MDR-TB cases can be up to a hundred times more expensive to treat than "regular" TB.

Fifthly, we can **reduce risks of disease spread as a consequence of population mobility**. With the increasing globalization of trade and travel infectious diseases pose a threat not only to the poor of developing countries, but to the populations of wealthy countries as well. Bacteria, viruses and parasites can easily cross borders, carried unknowingly by international travellers. In 2000, there were nearly 100 000 cases of TB in Europe and North America attributable to travel between countries.

Sixthly, we can **make progress against the most formidable childhood killers**. While childhood deaths from other major infectious diseases – such as measles and diarrhoeal disease – have fallen during the past two decades in tropical Africa, malaria mortality remains unchecked and has increased during the past decade. Likewise, the AIDS epidemic is cancelling out hard-won gains in child survival and development over the past few decades. In several African countries, AIDS has sent infant and under-5 mortality rates spiralling upwards from 2% of under-5 mortality in 1990 to 7.4% in 1999.

Seventhly, we can **prevent HIV from engulfing Asia and eastern Europe**. The AIDS epidemic is already the largest single cause of premature death among adults in sub-Saharan Africa and continues to spread rapidly in many other parts of the world. If we wait another decade before taking decisive action, the HIV/AIDS epidemic in China, India, large parts of central and eastern Europe and the Central Asian republics could surpass even the scale of the current epidemic in Africa, thwarting the prospects for economic development and poverty alleviation in these regions.

Finally, we can **strengthen health services** by investing now in a concerted global effort against these three major infectious diseases. For example, when more doc-

Geographical distribution of HIV/AIDS, tuberculosis and malaria

HIV/AIDS	70% of people living with HIV/AIDS are in sub-Saharan Africa, but the epidemic continues to spread throughout the world. In 2000 there were about 1.5 million people living with HIV in industrialized countries.
Tuberculosis	80% of all cases of tuberculosis occur in just 22 countries, most in Africa and Asia. There were 121 000 cases in industrialized countries in 2000.
Malaria	90% of the world's 300 million annual malaria cases and 97% of more than 1 million annual malaria deaths occur in sub-Saharan Africa. The majority of the remaining cases and deaths occur in Central and South America Developed countries reported over 13 000 cases in 2000, imported by travellers.

tors, nurses and other health service providers are trained and posted to rural areas, they will not only confine their work to AIDS, TB and malaria, but will be there to meet many other health needs in the low-income communities they serve. Low-and middle-income countries endure a "double burden" of infectious diseases and noncommunicable causes of suffering and death. Infectious diseases such as measles, diarrhoea and pneumonia, often in combination with malnutrition, together claim the lives of more than 5 million infants and under-5 children every year. Complications of pregnancy and childbirth, together with malaria and poor nutrition, are responsible for over half a million maternal deaths each year. Social and behavioural challenges, such as the need to prevent maternal ill-health and malnutrition, and to improve sanitation, can be more easily addressed through a massive effort to develop national and local capacities to address HIV/AIDS, TB and malaria.

Building on existing successes

Many countries are already taking effective action to curb the infectious diseases which cause and perpetuate poverty. Through political commitment, effective partnerships and appropriate strategies, dramatic progress is already being made in some parts of the world against infectious diseases and other causes of death, disability and suffering among infants, children and mothers.

In Nepal, for example, the DOTS strategy – WHO's recommended strategy for controlling TB – has been extended to 75% of the population, reducing the number of TB deaths from between 15 000 - 18 000 in 1994 and between 8 000 -11 000 in 1999. In Peru, which previously had one of the highest TB infection rates in Latin America, expansion of the DOTS programme has almost halved TB incidence between 1991 and 1999.

In Viet Nam, as a result of using insecticide-treated nets, indoor spraying with insecticides and locally-produced

effective drugs, the death toll from malaria was reduced by 97% between 1992 and 1997.

In Uganda, where HIV infection rates were the highest in the world during the late 1980s, a broad-based campaign with strong political leadership has led to a reduction of HIV prevalence by 50% - 60% among pregnant women, and even larger reductions among groups of young people in the 1990s.

The principles underlying these successes must be applied as widely as possible. The great challenge now facing the global health community is to "scale up" successful interventions such as these, so that they reach the great majority of the poor within the shortest possible time.

Effective scaling up will require an extraordinary global effort, involving international agencies, government donor organizations, national and local governments, health professionals and development workers, nongovernmental organizations (NGOs), community groups, faith-based organizations, foundations, business leaders and private philanthropists. At country level, it must be based on government stewardship of resources, and linked to community participation in all aspects of planning and management of activities.

The great challenge facing the global health community is to "scale up" successful interventions to reach the great majority of the poor within the shortest possible time.

For all those involved, measurable goals have been set to evaluate the success of heightened international efforts to cut the toll of death and suffering from AIDS, TB and malaria. At the meeting of G8[1] and G77[2] leaders in July 2000, world leaders endorsed the following specific targets as proposed by United Nations agencies and a cadre of international health experts:

- **HIV/AIDS.** To reduce the number of newly-infected young people by 25% by 2010.
- **Tuberculosis.** To halve TB deaths and prevalence by 2010.

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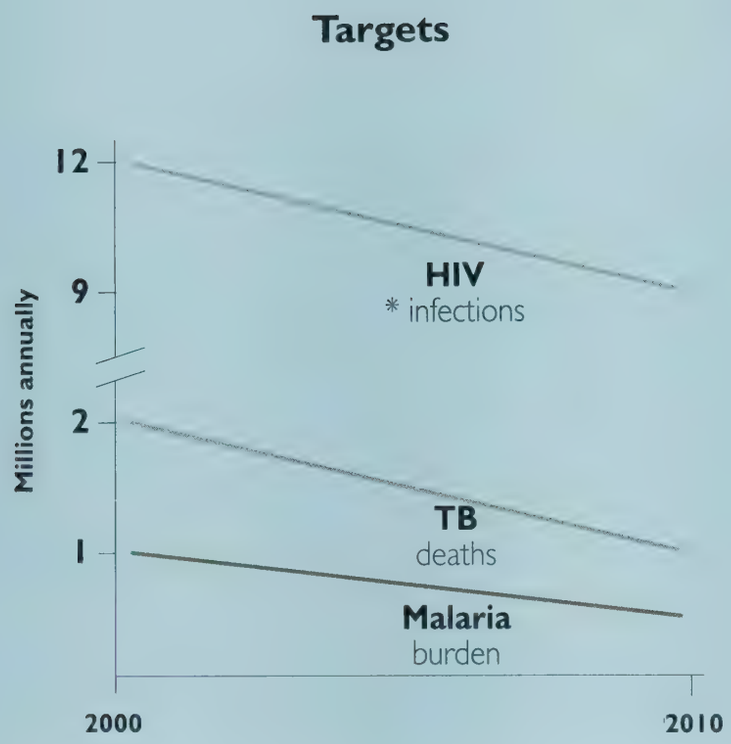
1. G8: group of seven industrialized countries and Russia

2. G77: group of seventy seven developing countries



Source: WHO/CDS

*** number of young people infected with HIV**

- **Malaria.** To reduce the malaria disease burden by 50% by 2010.

The UNGASS Declaration of Commitment of July 2001 also set additional major targets for HIV/AIDS. These are ambitious goals, and the time frame for meeting them is short given the increased urgency of curbing these three killers. As many more individuals and organizations become active in this global campaign – especially those not normally involved in health issues – a common strategy and vision of the way forward must be forged.

A road map for scaling up against diseases of poverty

For those who are just becoming involved in the fight against diseases of poverty, this report is intended to provide a basic "map" of existing initiatives against HIV/AIDS, TB and malaria. While there are many initiatives and success stories that could be cited in such a survey, this report highlights some of those which are most recent, innovative, extensive or successful.

It is also intended to provide the broad outlines of a single "road map" to scaling up efforts to control these diseases. While no single plan will suit every country, this report points toward models that can be emulated, and policies and initiatives that have yielded repeated success and that can be extended to provide direction for the emerging global movement against diseases of poverty.

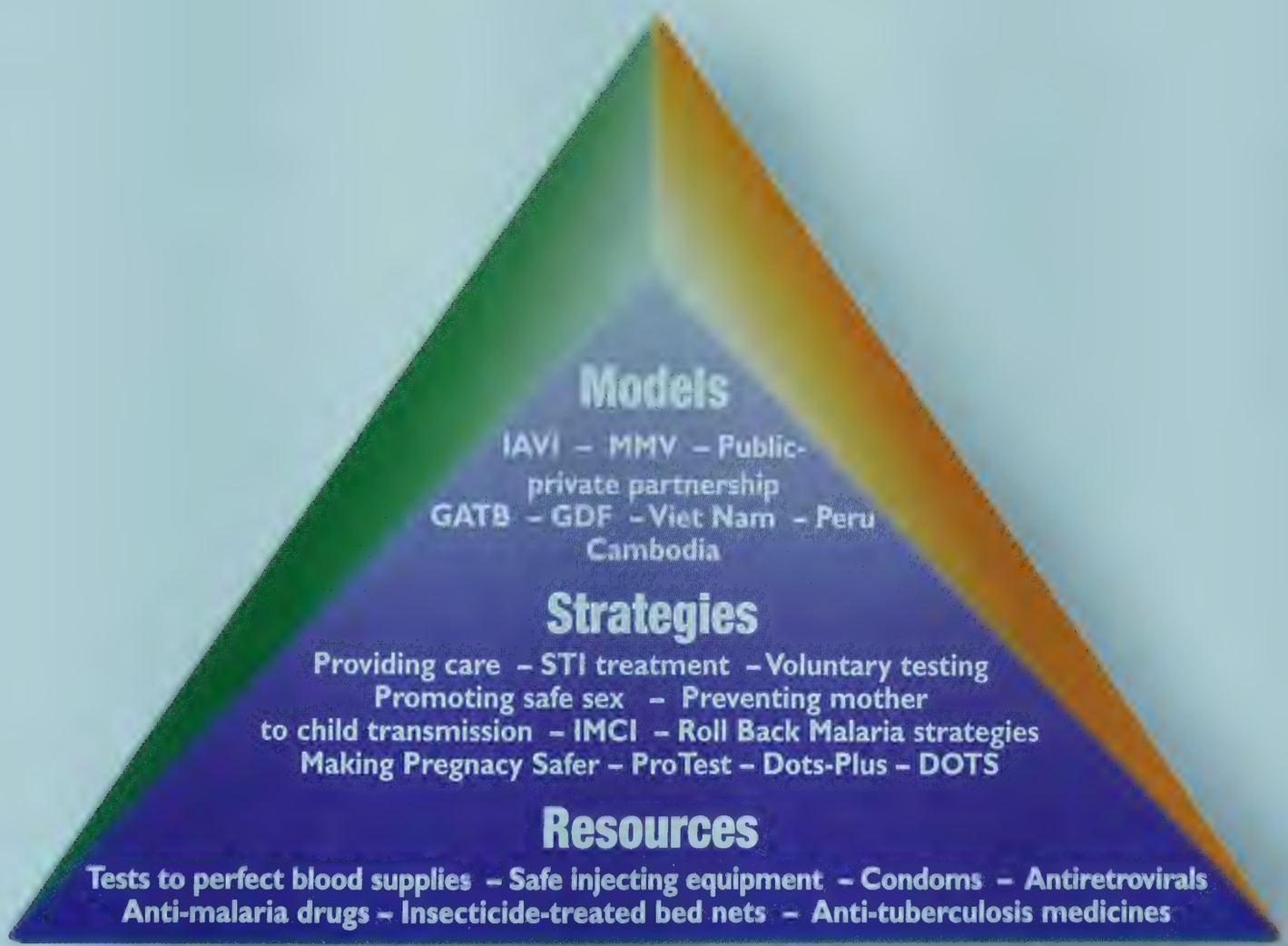
Chapter 1 documents the interventions – existing medicines and tools, as well as prevention and treatment strategies – that have proved to be effective in responding to these three major diseases. Chapter 2 outlines how health services in developing countries can be strengthened and expanded in order to provide these interventions. Chapter 3 shows that even if well-equipped health services are available, the individual at risk of these diseases still faces a

choice of whether or not to adopt the required healthy behaviour and explores how healthy behaviour can be encouraged. Finally, in Chapter 4, the report examines how we can go to scale with our efforts to curb these three diseases, multiplying and extending successful models so that they can help protect the health, lives and incomes of millions more people around the world.

Each of the first three chapters is divided into three sections. Firstly, what resources are available – and what resources are required – for the challenges at hand? Secondly, what strategies have proved successful in making maximum, cost-effective use of these resources? Thirdly, what successful models exist that demonstrate how we can apply these strategies in the poorest conditions?

We already have the tools and knowledge to significantly ease the burden of HIV/AIDS, TB and malaria. What is lacking is the commitment to put them to work. If we can control these diseases, not only will we prevent millions of needless premature deaths, we will also be helping people to be in a better position to free themselves from poverty. By breaking the long-standing link between destitution and disease, we can make a historic contribution to promoting prosperity, social justice and human dignity.

EFFECTIVE INTERVENTIONS



Tools to prevent or cure AIDS, TB and malaria have been available for decades. Yet worldwide, fewer than 25% of those at risk have access to the most effective of these products and commodities.

Over the coming decade we can make substantial progress in fighting the diseases that are devastating the health and well-being of millions of poor people. We have the medicines that can cure TB, malaria and the opportunistic infections associated with HIV. We have the health commodities (condoms, nets and safe insecticides) that can prevent HIV and malaria transmission. And increasingly, affordable drugs are becoming available that can delay the development of AIDS and prevent mother-to-child transmission. Responding to the challenge of these three killer diseases requires accelerated action to make interventions more widely available. At the same time it requires intensified efforts in research and development of new drugs, diagnostics, vaccines and other essential health commodities that are even more effective.

Nearly 95% of people living with TB can be cured with medicines that cost as little as US$ 10. It is estimated that as many as 1 in 2 malaria deaths can be prevented if people have ready access to a rapid diagnosis and treatment with anti-malarial drugs – costing as little as US$ 0.12 for a tablet of chloroquine. In addition, one quarter of child deaths can be prevented if children sleep under insecticide-treated nets – costing US$ 4 – to avoid the mosquito bites that can cause malaria and prevent mosquitoes from carrying infections further. When used consistently and properly, condoms – a year's supply of which can be provided for US$ 14 – are extremely effective in reducing the spread of HIV.

Affordable strategies have been developed to provide these medicines and supplies in the poorest of communities. For example, DOTS – a 5-pronged strategy for the detection and treatment of TB – has proved highly effective in ensuring that patients take their medicines properly. With the IMCI (Integrated Management of Childhood Illness) strategy, disease control for childhood diseases enables immediate treatment of the five most common causes of childhood deaths – malaria, pneumonia, diarrhoea, measles and malnutrition. Intensive use of well-targeted, low-cost HIV

prevention and care strategies can prevent millions of new HIV infections.

RESOURCES AVAILABLE – AND THOSE STILL REQUIRED

Tools to prevent or cure AIDS, TB and malaria have been available for decades. Yet worldwide, fewer than 25% of those at risk have access to the most effective of these products and commodities. Moreover, the potential of scientific knowledge and research capacity to develop even better and more affordable tools is enormous. Only a tiny fraction of the world's medical research however, is devoted to finding even better tools to control these diseases of poverty.

Tools and medicines to stop TB

The first of nearly a dozen effective antituberculosis medicines was discovered in 1944. Over the next three decades, enormous strides were made against TB in the industrialized world, permitting wealthy countries to effectively control this feared disease. Today, the medicines exist to treat TB effectively and cheaply. Taken regularly for a period of 6 months, available antituberculosis drugs are nearly 100% effective in curing the lungs and other parts of the body. Drug-resistant strains of TB are also becoming curable with more effective use of second-line drugs. These drugs are expensive, but are becoming less so as a result of cooperation between manufacturers and health-care providers.

Diagnostic tools for detecting the disease have also become much more effective and inexpensive. Previously, multiple X-rays of the lungs were required to detect the presence of the damage caused by rapidly-multiplying TB bacilli. In recent decades, a much more accurate and inexpensive means of diagnosing TB has come into use: sputum coughed up from the lungs is stained and then examined under a microscope for the presence of TB bacilli. The materials to conduct each test cost as little as US$ 0.50 in developing countries.

Effective tools

The following affordable medicines and tools are highly effective, when used correctly.

TB medicines cure 95% of TB cases.
Cost: US$ 10 for a 6-month course treatment.

Antimalarials cure 95% of cases.
Cost: US$ 0.12 per tablet.

Insecticide-treated mosquito nets can reduce malaria deaths.
Cost: US$ 4 per net.

Condoms are highly effective in preventing HIV.
Cost: US$ 14 for a year's supply.

Tools and medicines to roll back malaria

Preventing malaria through the use of insecticide-treated nets has been shown to be a highly cost-effective tool for decreasing disease and death, particularly among pregnant women and children under 5 who are especially vulnerable to the disease. Nets to prevent mosquito bites can cost as little as US$ 4 and a year's supply of insecticide to retreat the net can cost US$ 0.50 to US$ 1. Dip-it-yourself kits and single-dose sachets of insecticide are now available for re-treating the nets at home. A long-lasting, wash-resistant, treated net which will remain effective for up to 4 years will soon be available.

In the last 10 years, the malaria parasite has grown increasingly resistant to the most common treatment, chloroquine. However, it was found that a combination of anti-malaria drugs using the Chinese herb-derivative artemisinin could achieve malaria cure rates above 95%, even in areas of multidrug resistance. In May 2001, in a joint effort to provide essential medicines at affordable prices, WHO and the Swiss pharmaceuticals company Novartis announced that developing countries would be provided with this new treatment for drug-resistant malaria. Novartis supplies the new therapy, called Coartem, at a cost of about US$ 0.10 a tablet, or less than US$ 2.50 per full treatment or around US$ 1 for a young child. In addition, intermittent preventive treatment with sulfadoxine-pyrimethamine (SP) has been introduced for pregnant women.

New tools for malaria diagnostics using dipstick tests, new treatments such as artesunate suppositories and prepackaged combinations of medicines make for more effective home treatment. A simple pack of fast-acting drugs made widely available to mothers – together with training to recognize malaria symptoms – could save the lives of many children with severe malaria. User-friendly packaging of anti-malarials is a low-cost way of increasing compliance. Studies in Ghana show that more than 80% of patients given a

course of antimalarial drugs packaged in a numbered blister pack finished the course of treatment. Of those receiving loose, unpackaged drugs – the way they are usually dispensed in developing countries – only 65% completed the treatment. Using blister packs was also shown to help patients by halving the time they had to wait at dispensaries.

Tools and medicines to fight the HIV/AIDS epidemic

Effective responses to the epidemic involve reducing the risk that people face of becoming HIV positive and providing care for people infected with HIV/AIDS. It is also vital to curb the impact of the epidemic at community level by helping communities to understand behaviours that increase vulnerability to HIV/AIDS. Efforts in these areas operate together: prevention and care form a virtuous circle to reverse the spread of the epidemic and mitigate its impact.

It has been repeatedly demonstrated that increasing the use of condoms is the most effective way of bringing down the rate of HIV infection. In Thailand, for example, the government introduced the "100% Condom Campaign"which worked intensively with brothel owners, sex workers and clients, including political, police and public health authority backing. The results have been impressive. Surveys show that more than 90% of commercial sex encounters now involve condom use, up from about 15% before the campaign began. HIV infection rates have also begun to fall, along with levels of other sexually transmitted infections (STIs).

Other tools include drugs that prevent transmission of HIV from mother to child, and drugs that cure other sexually transmitted infections that are likely to facilitate HIV transmission. Where necessary, safe drug injecting equipment and the tests to protect blood supplies can also play an important role in preventing the spread of HIV.

A combination of new medicines known as antiretrovirals (ARV) has been developed to postpone the emergence of

Responding to the challenge of these three killer diseases requires accelerated action to make interventions more widely available.

Available tools

Prevention	Treatment and care
TB	
BCG vaccine, effective in children but not adults	Sputum-smear examination to quickly detect infectious TB cases and prevent a further spread of infectious TB. Anti-TB drugs.
Malaria	
Insecticide-treated nets Insecticides Intermittent preventive treatment	Antimalaria medicine combinations. Artesunate suppositories. Dip-stick malaria diagnostics.
HIV/AIDS	
Inexpensive condoms (male and female) Clean needles for safe injection practices Safe blood for transfusion Diagnostics in support of voluntary counselling and blood testing Rapid diagnosis and treatment of STIs	Antiretrovirals Essential drugs for palliative care. Drugs for the treatment of opportunistic infections including TB.

AIDS. The drugs work in combination to prevent the HIV retrovirus from reproducing and infecting additional cells in the body. When properly taken, according to a schedule that can be quite complicated, ARVs have been shown to be effective in slowing the spread of HIV and preventing the development of AIDS. They do not cure AIDS, but they prolong and dramatically improve the lives of people living with HIV. However, because of the high cost of these drugs and the medical back-up systems needed to monitor their use, very few people in developing countries with high HIV prevalence have access to them.

Research to develop even better tools and medicines

If used more widely, existing medicines and prevention tools for these diseases could save millions of lives. However, none of them can completely eliminate HIV/AIDS, TB or malaria. The development of vaccines will likely provide the only quick way to eventually stop the spread of infection. Moreover, the increasing spread of bacteria, viruses and parasites resistant to first-line treatment requires the development of new medicines, as older ones gradually lose their effect.

Research and development into new drugs, vaccines and commodities is a crucial component for building up effective ammunition against diseases that keep people in poverty. So far, however, only a relatively small amount of money is spent on research into these diseases. For example, less than 1% of the US$ 70 billion spent in 1998 on the research and development of new medicines, vaccines and diagnostic tools was devoted to HIV/AIDS, TB and malaria. Of the 1233 drugs that reached the global market between 1975 and 1997, only 13 were for tropical infectious diseases that primarily afflict the poor.

For TB, longer term strategies in order to research and develop new diagnostic tools and drugs to compensate for

the spread of anti-microbial resistance are critical, as is the development of an effective vaccine to replace BCG. The effectiveness of many antimalarial drugs is also decreasing as the malaria parasite and mosquito become resistant to existing drugs and insecticides respectively. It is extremely important to invest in the research and development of improved affordable drugs including combination therapies that are safe and effective, particularly for drug-resistant malaria.

Until now, efforts to develop a safe and effective vaccine against HIV have been hampered by failure to evoke or identify a protective immune response. So far, most of the clinical trials have been staged in industrialized countries, but now trials are increasingly being done in developing countries as well. During the 1990s, several vaccine initiatives were launched in developing countries, including some in Africa. About 30 experimental HIV vaccines have been tested so far, all of them in the early phases of clinical trials. This year two large-scale trials are under way in the United States and in Thailand. Initial results are expected towards the end of 2002. Numerous other vaccine endeavours are also under way.

New drugs and diagnostic tests for sexually transmitted infections currently under development could help prevent their spread, ensure prompt and more effective treatment and provide a valuable weapon in the fight against HIV/AIDS. The currently available STI tests are too expensive for use in most developing countries and laboratory analysis is not always available. Moreover, a syndromic case management – a cost-effective way of treating STIs on the basis of symptoms alone – is often inadequate for women as they may have no symptoms of infection. Efforts are also continuing to develop a vaginal microbiocide that could inactivate HIV and other microbes that cause STIs. This would be a major breakthrough in efforts to protect women who are unable to insist on condom use.

EFFECTIVE STRATEGIES

Over the past two decades, innovative strategies have been developed to increase the availability of tools and medications for controlling these three diseases to ensure that they are accessible even to the poorest communities. Cost-effective strategies have been developed to mobilize both professional and volunteer health service providers particularly in regions where hospitals and health clinics are few and far between, to bring these interventions closer to households on an out-patient basis. Operational research continues to improve these strategies and make existing medicines and tools even more accessible.

Effective strategies for stopping TB

Millions of TB deaths can be averted through the use of DOTS – a public health strategy designed to carefully monitor each patient's progress toward being cured while they are being treated with a combination of inexpensive TB drugs. This highly effective health care package is based on a system of management and supervisory techniques designed to ensure that every person involved in a TB control programme successfully completes the tasks for which they are responsible. A key component is regular ongoing support to the patient. This includes observation to ensure that patients follow the treatment correctly and a follow-up sputum test to determine whether it has been successful. The strategy can cure disease in over 85% of infectious patients, even in the poorest countries. The DOTS strategy involves five essential elements:

Microscopy: Accurate diagnosis of active TB is the first step in early detection of infectious patients; it sets the DOTS cure cycle in motion.

Drug Supplies: Regular, uninterrupted supply of the 4-6 most effective drugs.

Monitoring: Through regular, standardised reporting procedures that hold health workers accountable for curing the

patient. Rigorous record-keeping also provides early warning for emerging disease trends such as multidrug-resistant TB.

Treatment: Regular, directly-supervised treatment by health workers or volunteers for a period of 6-8 months.

Political commitment and resources: TB control is a public health responsibility and top level support is crucial.

Though only a dozen countries followed this strategy a decade ago, today DOTS is being used in 119 countries. One in four TB patients throughout the world is being treated under DOTS, although very few countries with a high burden of TB have expanded DOTS to reach the whole population. If the global targets for controlling TB are to be reached, a rapid expansion of DOTS services is needed, especially in high-burden countries.

While DOTS has proved to be very successful, the effectiveness of this strategy is facing two new challenges: the spread of multidrug-resistant TB (MDR-TB) and the co-epidemic of TB/HIV. To address these challenges WHO and its partners have established two new strategies: DOTS-Plus for MDR-TB and proTest for TB/HIV.

DOTS-Plus is a pilot strategy to address multidrug-resistant TB, defined as resistance to at least isonazid and rifampicin, the two most powerful TB drugs. This strategy includes the five elements of DOTS and in addition takes into account other issues that need to be addressed in areas where there is a relatively high prevalence of MDR-TB. The aim is to assess the feasibility and cost-effectiveness of treating MDR-TB with more effective drugs in resource-limited settings.

To tackle the TB/HIV co-epidemic, proTest is promoting voluntary counselling and testing for HIV as an entry point for a range of HIV and TB prevention and care interventions. Two-thirds of the people living with HIV worldwide are in sub-Saharan Africa and more than 90% do not know they

are infected. The region accounts for 70% of all co-infections with TB/HIV.

Effective strategies for rolling back malaria

Widespread prevention and prompt treatment provide the basis for the Roll Back Malaria strategy. Up to 30% of malaria deaths can be prevented if children at risk sleep under nets. With social marketing strategies, nets can be promoted and made available to communities at risk. In areas of stable malaria transmission pregnant women, who are particularly vulnerable to infection, should receive intermittent preventive treatment to reduce the risk of malaria and associated anaemia, and also reduce the risk of low-birth weight which endangers the survival and healthy development of newborns.

In areas of high seasonal malaria transmission, other mosquito-control measures continue to play an important role. Monitoring of mosquito populations is also critical for assessing whether resistance to the currently-used insecticides is emerging and whether there is a need to switch to other insecticides which are more effective.

Effective strategies for fighting HIV/AIDS

There are two core priorities in the fight against the HIV/AIDS epidemic: preventing the spread of the disease and providing care and support to those infected and affected by HIV/AIDS.

Prevention focuses largely on promoting safe sex and the use of condoms; it also involves postponing the first sexual encounter for young people and mobilizing community support against non-consensual sex. Voluntary testing and counselling, harm reduction approaches to injecting drug use, treatment of STIs and preventing mother-to-child transmission are of equal importance. All these measures face behavioural, cultural and religious barriers. But delaying

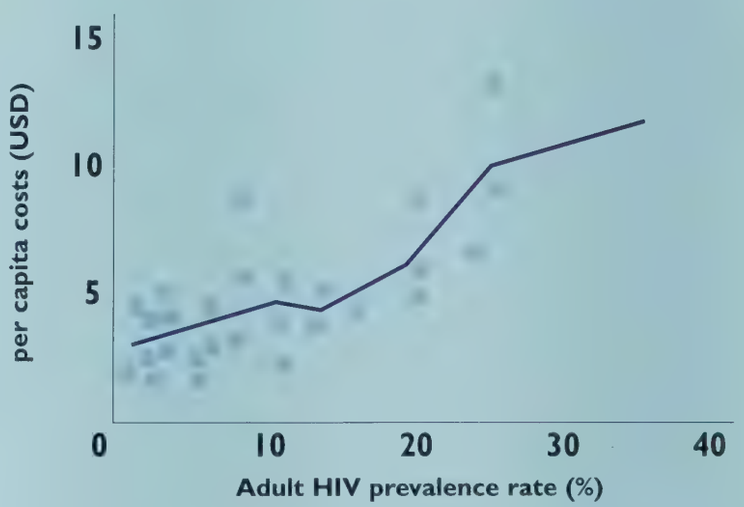
prevention results in escalating costs. Per capita costs of addressing the epidemic rise steeply as the prevalence rate increases. Early and effective interventions have been shown to keep prevention costs low.

Few countries have succeeded in prevention efforts without strong political commitment at the highest level that can engage a broad range of partners and address the stigmatization and denial associated with HIV/AIDS. During the 1990s the success of prevention campaigns in Senegal showed that HIV infection rates could be kept at very low levels against all the odds with strong political commitment. Political leaders took the initiative early on, openly discussing the issues. Safe sex education was integrated into the school curriculum and support obtained from the religious community. Condom use was promoted and treatment for sexually transmitted infections made widely available.

Effective responses to HIV/AIDS involve preventing the spread of the disease, hand in hand with reducing the impact of the epidemic on households and communities. Providing care and support to those infected by the epidemic include actions to ensure that people with AIDS have access to antiretroviral drug therapy and drugs for treating opportunistic infections.

Antiretrovirals (ARVs) have proved effective in extending the lives of people infected with HIV and it is desirable to put them to more extensive use in developing countries, bearing in mind the respective infrastructures and other health priorities. Although HIV prevention strategies remain much more affordable and cost-effective than the provision of ARVs, both strategies require the effective organization of health systems to reduce the impact of the epidemic. Intensive efforts and additional funds will be needed to strengthen the capacity of health systems in countries where they are currently underresourced and underperforming, to ensure access to ARVs, including the development of health and social services to monitor patients. Addressing the issues of social stigma and denial

HIV/AIDS prevention, treatment and basic care in sub-Saharan Africa



Source: UNAIDS, 2000

are of critical importance, as are strategic actions in community mobilization.

Focusing on children, pregnant women and mothers

Malaria has been shown to affect mainly children and pregnant women and young mothers. In the particular case of malaria, life-saving improvements can be made through the Integrated Management of Childhood Illnesses (IMCI) – a strategy focusing on children – and Making Pregnancy Safer – a package concentrating on pregnant women and mothers.

IMCI helps tackle malaria, as well as diarrhoea and respiratory infections – often associated with HIV/AIDS, in children and adolescents, facilitating rapid detection and treatment even at the periphery of health care systems. IMCI focuses on preventing and treating the five most common causes of childhood death: pneumonia, diarrhoeal diseases, malaria, measles and malnutrition.

IMCI is a broad strategy to improve child health, which encompasses interventions at home, in the community and within the scope of health systems. Its aims are to reduce child deaths, diseases and disability and to improve children's growth and development, with a special focus on the poorest and most disadvantaged. Three main components concentrate on family and community practices affecting child health and nutrition, on health systems and on the skills of health workers. The strategy also responds to the needs of care givers. IMCI is a flexible strategy that addresses preventive and curative interventions, including improved infant and child nutrition, the promotion of breastfeeding, immunization and the use of insecticide-treated nets in malaria-prone settings. The IMCI treatment guidelines have been developed to assist health workers to recognize signs of children's illness easily and to take appropriate action, even if there are coexisting health conditions.

For expectant and new mothers, pregnancy and birth can be made safer through simple and often inexpensive measures, such as intermittent preventive treatment for malaria, treatment of opportunistic infections in those with HIV infection, HIV testing and preventing mother-to-child transmission, and the presence of skilled attendants during birth. The Making Pregnancy Safer is WHO's strategy which ensures good health care throughout pregnancy and childbirth and helps prevent maternal and perinatal deaths as well as lifelong disabilities due to complications of pregnancy. Integrated Management of Pregnancy and Childbirth (IMPAC) package forms part of this strategy. IMPAC costs no more than US$ 3 per year per capita in low-income countries and is designed to prevent maternal and infant deaths. It involves ensuring access to:

- antenatal care;
- normal delivery care assisted by a skilled birth attendant;
- treatment for complications of pregnancy;
- neonatal care;
- family planning advice;
- management of sexually transmitted infections.

Effective strategies for stimulating research

Public-private partnerships are proving a viable means to increase efforts to research and develop better and more affordable tools to fight AIDS, TB and malaria. Partnerships between the public and private-sectors can provide incentives for pharmaceutical companies to invest in the research and development of new tools to fight diseases of poverty. Such incentives must create confidence that there will be viable markets for more effective and affordable tools when they are developed, and help to accelerate the provision of potentially useful products that are currently in the pipeline.

Likewise, increased cooperation between the research institutions of developed and developing countries, and between industry and academia, is stimulating the develop-

ment of new prevention and treatment strategies for infectious diseases. Such cooperation focuses on access to more affordable essential drugs, expanding in-country training in laboratory and research techniques, and enhanced international commitment.

SUCCESS IN THE MIDST OF POVERTY

Almost half of all deaths in developing countries are due to infectious diseases. But wherever a low-cost strategy is available to prevent or treat infectious diseases, individual countries – even poor ones – can make dramatic progress in bringing them under control. Some of the success stories which follow are evidence that widespread and wise use of low-cost tools and strategies coupled with flexible new ways of working, often through partnerships and across sectors other than health, can have a major impact. Others demonstrate that innovative partnerships between the public and private-sectors can stimulate the development of even more effective interventions.

Peru cuts its TB burden in half

The highly successful TB programme in Peru provides overwhelming evidence that the DOTS strategy works to stop the spread of TB. With only 3% of the population of the Americas, Peru accounted for 15% of the region's TB infection in 1997. It was one of the world's 22 highest-burden countries for TB. Not only health, but also national productivity and prosperity were being undermined.

DOTS was adopted in 1990 and now covers the entire country. The Peru TB programme's dynamic leadership succeeded in increasing the proportion of infectious cases treated under DOTS from its 1990 level of just over 70% to 100% by 1998, with a cure rate over 90%. Rapid expansion was possible because the country already had a TB programme with trained nursing staff in place, to which political commitment, sufficient resources for drugs and a dynamic leadership were added. Strengths of the programme include the stability of the TB management team

Strategies

DOTS for curing TB and preventing its spread.

DOTS-Plus for curing multidrug-resistant TB and preventing its spread.

ProTEST for HIV/TB co-infection.

Social marketing of condoms for preventing HIV and nets for malaria prevention.

Voluntary counselling and testing for HIV.

Health and sex education in school and beyond.

IMCI (Integrated Management of Childhood Illness) for preventing and treating malaria and other childhood diseases, with a special adaptation for children who are HIV-positive.

Making Pregnancy Safer for reducing maternal and perinatal deaths due to malaria and other diseases.

and a budget of more than US$ 5 million, fully provided by the state.

Because the TB programme is a national priority, drugs are free to patients and food packages are given as an added incentive to encourage low-income families to comply with the requirements for regular check-ups. In addition, drug financing is maintained and supervision at intermediate levels ensured as the health sector is reformed. Peru is also the first of the 22 high-burden countries to systematically address the problem of multidrug-resistant TB, by offering the far higher treatment costs as an investment in a TB-free future.

Viet Nam reduces malaria deaths by 97%

A concerted drive against malaria in Viet Nam has had a dramatic impact on the number of malaria deaths and cases. Between 1992 and 1997, Viet Nam reduced its malaria death toll by 97%. Simultaneously, as a preventive intervention, the number of people using insecticide-treated nets provided free of charge soared from 300 000 to 10 million. Today, with its impressive success rates, Viet Nam is setting an example for the entire Mekong region to achieve the target of reducing malaria deaths by at least 50% by 2010.

Viet Nam's success has been achieved largely through countrywide provision of insecticide-treated nets, indoor spraying with insecticides, the use of high-quality antimalarial drugs, preventing malaria in pregnant women, and disease monitoring and reporting. Other important factors in the country's success were coordination of malaria control efforts at the local level and considerable investment in training and supervision of health workers in malaria-endemic areas. Disease reporting and epidemic forecasting systems were strengthened and supported nationally by 400 mobile teams. The development and manufacture of a new class of antimalarial drugs – artemisinin derivatives – to treat severe and multidrug-resistant cases of malaria was also a major breakthrough.

Cambodia slows the spread of HIV

In 1997, Cambodia had the highest HIV prevalence in all of Asia with almost 4% of the adult population infected. Today, it is one of only three developing countries in the world where the HIV/AIDS epidemic seems to have slowed and the number of new infections is actually in decline. This remarkable turn-around is attributable to its pragmatic, broad-based, comprehensive, frank and open national HIV/AIDS prevention programme.

Cambodia is using an innovative combination of evidence and advocacy. First, the national surveillance system, initiated in 1994-1995 with support from WHO and the United States Agency for International Development (USAID) and funded by the World Bank, provided hard data on the evolution of the HIV/AIDS epidemic. Then a coalition of partners mounted a vigorous promotion campaign borrowed from Thailand called "100% Condom Use" in all commercial sex establishments. Careful programme monitoring has shown that HIV infections among sex workers under the age of 20 actually dropped by almost half – from 40% to 23% – between 1998 and 2000.

The increasing number of patients with AIDS-related illness, however, threatens to overwhelm Cambodia's health services. This turnaround demonstrates nevertheless that prevention strategies – coupled with unswerving national commitment and leadership – can work to stem the tide of the HIV/AIDS epidemic.

Medicines for Malaria Venture

One of a new breed of partnerships whose uniqueness lies in its business approach to public health, the Medicines for Malaria Venture (MMV) offers a new perspective to the discovery and development of medicines to treat, and perhaps one day prevent, malaria. It addresses creatively the high cost and risk associated with pharmaceutical research and development, and seeks to discover and commercialize antimalarial medicines for low-income population groups in developing countries.

Established in 1999, MMV receives support from numerous sources, including WHO, the International Federation of Pharmaceutical Manufacturers Associations (IFPMA), the World Bank, the government of the Netherlands, the Rockefeller Foundation, the Global Forum for Health Research, the United Kingdom Department for International Development (DFID), the Swiss Agency for Development and Cooperation, the Bill and Melinda Gates Foundation, and ExxonMobil.

MMV supports the process of drug research and development (R&D) which requires a long-term engagement and investment anywhere from 3-7 years from concept to chemical compound, to clinical trials; then another 5-8 years to enter the commercial market on a scale that would generate a return on the original investment. Because earnings are limited by the drug's patent life that starts early in the development phase, a company investing in drug R&D must aim to recover the costs of that investment before its patents expire – usually 20 years from the date of filing. The total research cost for a portfolio of projects to produce drugs usually amounts to hundreds of millions of dollars per drug.

By creating a "public venture-capital fund", MMV hopes to provide the private-sector with incentives to discover, develop and commercialize antimalarial drugs at prices people can afford in countries hardest hit by the disease. The goal is to produce at least one new product every five years. MMV functions like a small R&D company. It is now targeting a budget of US$ 30 million a year until 2004, to be divided between drug discovery and development. If funding targets are reached, it is expected that the first product to be generated by MMV will be commercially available before 2010.

The International AIDS Vaccine Initiative (IAVI)

IAVI, created in 1996, promotes the development of safe, effective and accessible HIV vaccines for use throughout the world, especially in developing countries. Partners include national governments, vaccine and biotechnology compa-

Successful country projects

DOTS to stop TB:

- In China, Nepal and Peru, the DOTS strategy has cut TB deaths by half during the 1990s.

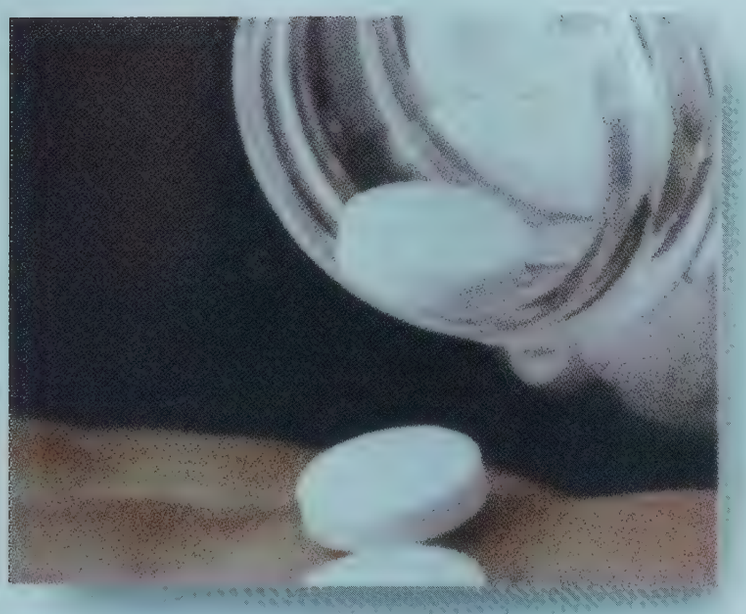
Malaria deaths are avoidable

- In Malawi, the number of babies born with dangerously low birth weight was reduced significantly when women received intermittent preventive treatment, sulfadoxine-pyrimethamine (SP), during pregnancy.
- In Viet Nam the use of insecticide-treated mosquito nets, early diagnosis and rapid treatment reduced malaria deaths by 97%.
- In Azerbaijan, early diagnosis, rapid treatment, vector control and epidemic response reduced malaria cases by over 50%.

Prevention and care for HIV/AIDS

- A broad-based national effort in Uganda reduced HIV infection among pregnant women in Kampala from 30% to 11.4% (1990-1999), and in urban areas outside Kampala from 13% to 5.2% (1992-1999).
- In Senegal, social marketing of condoms, sex education campaigns and improved STI treatment have kept HIV infection rates under 2% since the mid 1980s.

nies, academic and research institutes, international development agencies, NGOs and private corporations. Major funders include the Bill and Melinda Gates Foundation, the Rockefeller Foundation, the Sloan and Starr Foundations, the World Bank, UNAIDS, the governments of the United Kingdom, the Netherlands, Ireland, Canada and the United States. Since its establishment, IAVI has invested some US$ 20 million in innovative international vaccine development partnerships and negotiated groundbreaking intellectual property agreements to help ensure that the fruits of its labours will be available in developing countries.



Global Alliance for TB Drug Development

The Global Alliance for TB Drug Development (TB Alliance) was launched in October 2000 with the ambitious goal of developing an affordable new drug for tuberculosis by the end of the decade. Created by leaders in health, science and industry, the TB Alliance operates as a virtual R&D company with a social mission.

TB Alliance was designed to overcome the global market factors that led to a 30-year absence of serious R&D in tuberculosis. Existing drugs impose excessive treatment duration, strains of multi-drug resistant TB are spreading rapidly, and TB's convergence with HIV requires better preventive treatment. A new anti-TB drug that reduces treatment to 2 months, is effective against MDR-TB, and improves treatment of latent TB infection (LTBI) would dramatically reduce treatment costs and accelerate control and elimination of the disease.

To expedite the search for new therapeutics and bridge existing R&D gaps, TB Alliance partners with researchers in endemic countries and draws on new science and recent biomedical innovations. With creative agreements to share or acquire promising technology, TB Alliance will invest and manage a diverse portfolio of drug candidates. By outsourcing projects to public and private institutions, it will fund selected testing and development stages to further speed the process of delivering technology to the patients who need it most.

HEALTH SERVICES

In many developing countries, existing health services must be expanded, diversified and refocused to reach more people. New health services also have to be created where none currently exist.

Life-saving interventions must be delivered to those at greatest risk through health services. Health services provide the means for dispatching the tools and supporting the strategies needed to combat infectious diseases. These services are required to provide good-quality health care that is affordable, accessible, equitable and relevant to needs. If progress is to be made, vital components must include trained and well-motivated staff, laboratories and microscopes, health centres and facilities for storing medicines, and vehicles for visiting remote areas.

However, in most developing countries the public health system is poorly equipped to provide services that meet the main health needs of the population. Moreover, good quality private health care is often priced beyond the reach of the poor. The health systems of many developing countries are so weak that disease surveillance and reporting systems barely function, making it difficult to identify disease outbreaks and respond to the most urgent health needs.

RESOURCES FOR HEALTH SERVICES

Health services are frequently underfinanced in developing countries. The governments of some poor countries devote as little as US$ 10 per capita to health. In many African countries, external assistance accounts for a large share of government health budgets. In the early 1990s, 40% of Uganda's health budget was provided through donor assistance; Gambia met 84% of its health costs with foreign aid. Throughout the developing world, far greater amounts of money are often devoted to other areas such as military spending and the construction of prestigious public facilities.

Even when more money is forthcoming, resources alone are not sufficient. Governments must use these resources effectively and target them towards meeting the needs of the poor. In some countries, 60% or more of government health spending is devoted to urban hospitals serving just 10% of the population. In Ghana for example, the more affluent population account for three times more public

health spending than the poor. In 10 developing countries, between 1992 and 1997, only 41% of poor people suffering from acute respiratory disorders – including tuberculosis – were treated in a health facility compared with nearly 60% of the affluent. In the same period, only 22% of births among the poorest 20% of people were attended by medically-trained staff, compared with 76% among the richest 20%.

Economic constraints – many of them imposed externally – often dictate difficult national budgetary decisions. Because of its burden of debt, Nigeria made cuts in recurrent expenditures such as payment for health-staff salaries and supply of essential drugs, in both urban and rural areas. Niger spends more than twice as much servicing debt as it does on primary health care. Adjustment policies designed to compensate for inadequate resources, inequality and poverty resulted in deep cuts in government spending on health and infrastructure and left Niger's poor and marginalized people with virtually no access to medical care.

The combined impact of AIDS, TB and malaria has further stretched health services beyond their limits. During the late 1980s and the 1990s, the AIDS epidemic spread rapidly in Africa. In addition to AIDS, TB and malaria added a massive socioeconomic burden on already-struggling public health systems. Countries with very high rates of AIDS were simply overwhelmed, while health professionals were dying faster from AIDS than they could be trained. In one Zambian hospital, for example, deaths among health care workers increased 13-fold in the past decade as a result of AIDS.

When the public sector fails to meet the health needs of the population, those living in poverty must often opt for more expensive private medical services. Out-of-pocket payments to private medical services and traditional healers can exceed public expenditure and can cost a small fortune compared to the patient's earnings. Up to 90% of household expenditure on health in India is spent on private-sector health care, with the poor paying proportionally far

more than the rich. Much of this goes on drugs and treatments that are not medically justifiable or effective.

A shortage of health professionals and supplies

Health systems depend on people – professionals and support staff with the necessary education, training, skills and motivation to do their jobs effectively. However, there is often a mismatch: an oversupply of qualified staff with an undersupply of infrastructure, equipment and drugs – or vice versa.

Limited training and low pay for qualified health workers in many developing countries cause severe problems in service delivery. In Cameroon, the ratio of health professionals per acre is 1: 400 in urban areas and 1: 4000 in rural locations, requiring people to travel great distances to find health care in rural areas. This kind of imbalance is just as severe in rural areas of Cambodia, where 85% of the population lives, but where only 13% of health workers are based; and in Angola, where 65% of the population live in rural areas but only 15% of health workers, the vast majority of these having opted for better-paid jobs in urban areas.

In some countries, even where trained health staff are in place, primary care centres and district hospitals lack adequate facilities to diagnose infections and repeatedly run out of medical supplies and drugs. For example in Zambia, where the number of TB cases increased sixfold between 1992 and 1998, proper treatment was hindered because health facilities kept running out of TB drugs.

It is now widely recognized that protecting a community's health requires support beyond the responsibilities of doctors, nurses and professional medical staff. Health services can often be extended or diversified by using networks of volunteer health care providers. Religious organizations, other organizations (such as Rotary International, Zonta International and the Lions Club) and community organizations provide extensive networks of volunteers. They can be

trained to offer basic services such as the observation of TB treatment, distribution of insecticide-treated nets and education on how to prevent infection from HIV. Businesses and factories can integrate the provision of health services into the work week of their employees. Schools offer an obvious forum for educating future generations on how to protect themselves and their families from deadly diseases. Yet these vast networks of human resources are often untapped by national health systems.

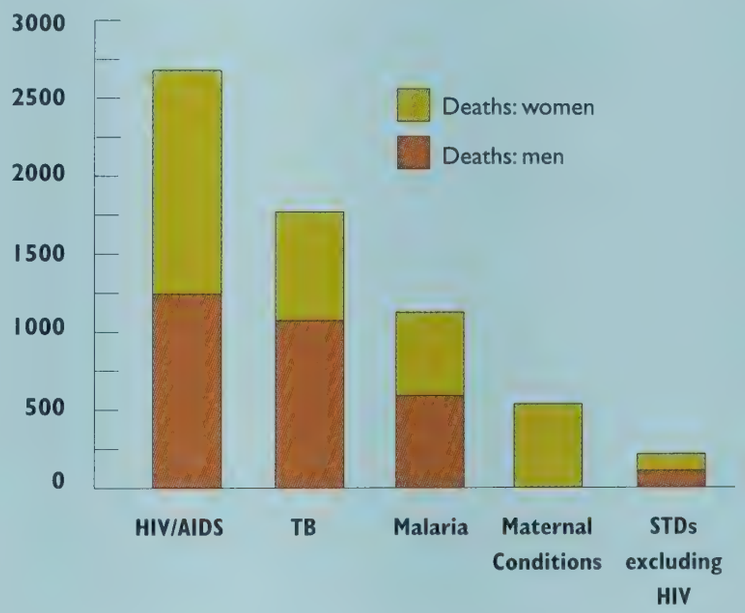
Poor access to services

In many developing countries groups that are marginalized because of their ethnic background, geographical location or gender are at higher risk of levels of infectious disease. For example, in north-eastern and south-eastern Brazil, (poor regions with large ethnic minorities) the death rate among children under-five for the poorest 20% of the population is now three times that for the richest 20% in the rest of the country.

A long history of gender discrimination also leads to inequalities that perpetuate women's lack of access to resources and services for themselves and their children. Almost 70% of the 1.2 billion people living in extreme poverty are women who experience more illness and are less likely to receive medical treatment before the illness is well advanced. In many cultures, the lower value assigned to women translates into higher levels of suffering, with nearly 33% of all causes of death among women being due to infectious diseases.

The death toll among women

Womens' deaths from infectious diseases & other life threatening conditions ('000)



Source: World Health Report, 2000

TEN STRATEGIC FACTORS FOR DELIVERING AND STRENGTHENING HEALTH SERVICES

In many developing countries, existing health services must be expanded, diversified and refocused to reach more people. New health services also have to be created where none currently exist. Where public health services are inad-

equate, they can be substantially expanded with services from the private and voluntary sectors. These sectors can also help develop innovative ways of diversifying services under government stewardship which will protect the interests of the poor and ensure that best public health practices are adopted. The following 10 strategies have been used by some countries to strengthen, extend and diversify their health services.

Debt-relief

A serious problem in the poorest developing countries is that public resources are too often diverted to debt repayment, leaving little to cover the health or other needs of the population. In Africa, more than one-third of national budgets are poured into debt repayments while less than one-tenth are spent on social services, including health. Help with this problem is increasingly being provided by the World Bank and the International Monetary Fund through the enhanced Highly Indebted Poor Countries (HIPC) initiative. The HIPC initiative focuses on 42 countries, 31 of which are also among the poorest in the world. The "enhanced HIPC initiative", which was launched in 1999, is now gathering momentum. This process promises faster, deeper and broader debt-relief. In some sub-Saharan countries national poverty reduction and social strategies include specific actions to prioritize health issues such as the control of HIV/AIDS, TB and malaria.

By July 2001, 23 countries had qualified for debt-relief amounting to US$ 34 billion from the World Bank. Taking into account debt cancellations by bilateral aid donors and reductions in commercial debt repayments, the overall debt-relief provided to these 23 countries amounts to US$ 53 billion, compared with an initial debt stock of US$ 74 billion. The debt service ratios of these countries will therefore be much lower than previously estimated. Equally important, the funds saved are being used for social and development spending, with the education sector (40%) and the health sector (25%) being the main beneficiaries.

Poverty Reduction Strategy Papers (PRSP) that countries prepare as part of the debt-relief process provide a framework and a process for linking policy discussions at the macro level, with health systems and community action to reach specific health outcomes. Several countries have selected infectious disease targets and indicators as PRSP core indicators, which will help in government financing of actions to scale up the response. For example, Cameroon have decided to increase the percentage of pregnant women sleeping under bednets.

Coordinating aid

In countries with widespread poverty, such as those in sub-Saharan Africa, too many health programmes continue to be "vertically" organized, without reference to local needs, and funded by individual donors. This burdens countries with sometimes inappropriate projects, advice and equipment – in addition to the administrative complexity of coordinating the contributions of multiple donors, with a variety of project cycles, procedures and special interests. Development assistance is nonetheless a vital resource in addressing the health needs of the poor, and must be put to optimal use. The Sector Wide Approach (SWAP) and other development frameworks, such as the World Bank's Comprehensive Development Framework, are aimed at achieving the greatest possible impact on health and development from the resources available – both local and external. They do so by reducing transaction costs, duplication and fragmentation of policies and services while increasing the focus on the health sector as a whole.

Development assistance is a vital resource in addressing the health needs of the poor, and must be put to optimal use.

Sector Wide Approaches can be seen as a coordination mechanism to accelerate the aid process. They work by encouraging dialogue to create stronger cross-sector plans, common financing and management arrangements, and help avoid redundant funding of development plans by donors. Government stewardship in this context implies a fundamental shift in the role of government – from direct provisioning of health services to indirect and far broader

oversight, strategic purchasing, financial rule-setting, and expanding health care and service delivery.

Surveillance

For progress to be made in tackling infectious diseases, the collection and analysis of information about their prevalence is vital. This involves tracking outbreaks and infection rates of individual diseases in each country and feeding this information into global networks that can then plan responses. It also involves monitoring the strains of a disease which are occurring in a particular area, and evaluating the impact of interventions and any evidence of drug resistance.

Many nations already have monitoring systems. Additionally, specialized alert networks, focusing on geographical regions or a single disease, also exist. But these surveillance systems have operated independently until now. WHO is weaving these systems into a Global Outbreak Alert and Response Network. Where gaps exist, WHO is providing training and equipment to build new disease monitoring systems.

Decentralizing health services by devolving decision-making and funds to district or local authorities and strengthening their capacity can make services more responsive to public health needs and more accountable to the people they serve.

Decentralizing services

Decentralizing health services by devolving decision-making and funds to district or local authorities and strengthening their capacity can make services more responsive to public health needs. Such decentralized services are also more accountable to the people they serve, and yet are still linked to central government, which sets overall policies and monitors how authority is exercised and how public money is spent.

Recent decentralization efforts in the United Republic of Tanzania have handed over authority to 35 districts, allowing them to set their own priorities within overall national guidelines, allocate funds, manage a strong monitoring and evaluation system, and train, hire and transfer specialist staff. Likewise, in Indonesia and Uganda, district governments have recently been given the authority to plan their own

development and allocate funds accordingly. The limited expertise and experience of local government staff in policy formulation, planning, and monitoring and evaluation is a challenge to the success of decentralization. Higher levels of government and local universities, however, can help to strengthen local capacity in these areas.

Inter-country initiatives

Institutional partnerships in and between countries are playing a vital role in capacity building. Several WHO collaborating centres in the South-East Asia region are working together to offer public health training for young people. In Thailand, for example, the Ministry of Public Health has trained more than 90 graduates who now run the epidemiological services in Thailand, and this programme has now been extended to neighbouring countries in the Mekong delta. The Asian Collaborative Training Network for Malaria involves nine countries with rotating country directorship, and supports managerial capacity in malaria programmes with regional training courses. The World Health Organization's collaborating centre in Thailand is supporting capacity development in HIV/AIDS care by offering training courses on the management and care of HIV/AIDS patients. In New Delhi (India), the National Institute of Communicable Diseases organizes paramedical training and short courses in outbreak investigation and response and the All India Institute has a two-year epidemiology training programme in Chennai. Another collaborator, the South-East Asian Ministers of Education Organization (SEAMEO) is working with WHO on mapping of tropical diseases in the Mekong region. Also in India, the management of TB with DOTS and a course on leadership training are being offered by WHO collaborating centres.

Cultivating broad-based partnerships

Effectively addressing the immediate needs for improved and expanded health care means introducing changes and

diversifying at a pace appropriate to each country's capacity, while planning longer-term improvements to infrastructure, institutional arrangements and capacity. The stakeholders in this process should also include academics, research institutes, NGOs, the private-sector and civil society. This is already happening in more advanced developing countries in Asia, where academic institutions already play a prominent role. Through exchanges at the health, scientific, R&D and policy levels, their potential is applied specifically to resolving local challenges in infectious disease control.

NGO and civil society participation

NGOs and civil society contribute to health-related activities through their knowledge of people's needs and by organizing grassroots activities. Although the performance of NGOs varies widely, they are often more effective and innovative than governments in delivering services directly to the poor. NGOs and civil society can also support the development of better governance. Once people themselves – particularly women and ethnic minorities – become organized in civil society organizations, they can influence local and national policy by articulating their health needs and holding authorities accountable. At the same time, they can lessen the control of power and funds by local elites.

Throughout the developing world, such groups are becoming more active and powerful in providing an alternative health service. For example, in Zambia, village councils formed partnerships with health authorities to tackle malaria. Then, supported by a donor, they stocked up on insecticide-treated nets, diagnostics and antimalarials for the prevention, rapid diagnosis and treatment of malaria. Faith-based organizations have played prominent and effective roles in health care delivery in many countries. The Christian Health Association of Kenya, for example, is involved in government policy-making, technical assistance and health-staff training, and advocates the waiver of health-service user fees for the poor.

Private practitioners

Private doctors provide health services to a significant proportion of the population in many developing countries, and their services are often put to greater use than public health services. Private practitioners are a valuable resource, located close to, and often trusted by, the community. They represent major opportunities to tackle global public health problems. However, private health care often places a huge financial burden and often provides services that are not always appropriate to people's needs.

For example, evidence from India illustrates both the strengths and weaknesses of private practitioners in the case of TB control. Studies show how the positive aspects – such as their proximity to TB patients and acceptance of their services by these patients despite costs – are often countered by their inappropriate TB management practices. This is generally a result of their ignorance about sound public health practice. Yet, one example of a private hospital working with a local TB control programme in India to implement DOTS demonstrates that this collaboration can be very effective. Bold and sensitive initiatives for bringing private and public health care providers together for a common cause could go a long way toward controlling major infectious diseases.

Corporate involvement

The ExxonMobil Corporation is playing a vital role in Roll Back Malaria (RBM) initiatives in five African countries: Angola, Cameroon, Chad, Equatorial Guinea and Nigeria. Launched in 2001 and initially targeted at the company's employees and their families, the aim is to extend malaria services to the community to give all people in these malaria-endemic areas access to essential medicines and prevention measures.

Led by national health ministries, these initiatives have been undertaken in full cooperation with RBM partners, including

nongovernmental organizations and private foundations. Each programme has its own focus. In Angola, it is performing baseline studies on insecticide-treated nets (ITNs). In Cameroon, it is the development of comprehensive ITN programmes, ranging from insecticide-treatment techniques to staff education and training. In Chad and Equatorial Guinea, the focus is on education and training for doctors and nurses who diagnose and treat malaria. In Nigeria, plans are under way to launch 12 village-based health clinics, which will be equipped with staff and resources to handle medicine distribution; they will also provide training in malaria prevention and control for pharmacists and health workers, in addition to making insecticide-treated nets available. Broader awareness-raising campaigns are being conducted together with these country initiatives, which may be expanded in the future.

The Coca Cola company has also recently formed a partnership with the Joint United Nations Programme on HIV/AIDS (UNAIDS) to work on marketing and distribution of education and health materials. Coca Cola is using the results of decades of market research and advertising knowledge to help develop public awareness and information campaigns. The company is also providing the resources of its Africa-wide network of manufacturers and distributors to spread education and information materials, as well as HIV testing kits, across the continent.

Listening to the poor

It is often mistakenly assumed that external agents deliver the benefits while the poor are passive beneficiaries. However, many interventions can be provided more effectively when resources are allocated to support basic social services so that the poor are empowered to help themselves. For example, microcredit schemes provide an important source of income, especially when a family is impoverished due to chronic or debilitating illness. In Nepal, a poor country with a high burden of TB, microcredit schemes linking regular group meetings with distribution of anti-TB med

icines have provided income-generating opportunities, while at the same time promoting better compliance with TB regimens.

MODELS FOR IMPROVING HEALTH SERVICE DELIVERY

Despite many obstacles, countries have managed to mobilize funds, skills, knowledge and action to reverse the impact of infectious diseases. These achievements usually originate in identifying and responding to the most urgent health needs and are a result of strong government commitment. They are also characterized by a commitment to removing barriers to health service access and making services equitable, accountable and supportive to the poor.

Azerbaijan

In just two years, Azerbaijan was able to reduce malaria cases by half as a result of strong partnerships.

Although malaria had been virtually eliminated in Azerbaijan by the end of the 1960s, the later break-up of the former USSR, followed by conflicts in the district of Nagorno Karabakh and economic turbulence, brought a disturbing resurgence of the disease in the mid-1990s. In response, a partnership was formed between WHO, the International Federation of Red Cross and Red Crescent Societies (IFRC), Médecins sans frontières Belgium, UNICEF and other UN agencies.

Then in 1998, in the context of WHO's newly launched Roll Back Malaria partnership, Eni – an Italian multinational oil and gas company – also joined as a private-sector partner. Eni, which has set up a network of health facilities for its staff, families and local communities in some 70 countries throughout the world, recently contributed US$ 767 000 to a three-year malaria control programme in Azerbaijan, which helped reduce malaria cases there by over 50% during the late 1990s.

The project built capacity for early malaria diagnosis and rapid treatment, improved surveillance and epidemic

response, promoted cost-effective mosquito control and strengthened operational research capacity within the Azerbaijani Ministry of Health in collaboration with the ministries of agriculture and water management, as well as the private-sector. The campaign was impressive: during 1998 alone, some 400 000 at risk people received preventive medicines and case detection was improved. As a result, the number of malaria cases was halved in only two years, and dropped from its 1996 high of 13 000 cases to only 1 500 in 2001.

Bangladesh

One of the largest NGOs in the world is BRAC – the Bangladesh Rural Advancement Committee – which has successfully provided health, education and microfinancing services to the poor. Its capacity and efficiency have often exceeded that of the government. Although the emphasis of BRAC's work is at the community level, its success has been instructive for national and even global policy initiatives.

To ensure sustainability, all of BRAC's health activities are integrated within essential health care programmes. A network of local health specialists and workers provides services for child survival, family planning, women's health and TB in numerous fully-equipped facilities. The community-based TB control programme, covering a population of 13.4 million, has a cure rate of nearly 87%. In the course of its work, BRAC has been instrumental in mobilizing thousands of community health workers to care for TB patients; training health specialists; building facilities and equipping laboratories with diagnostic equipment and supplies.

BRAC's experience with TB treatment using the DOTS strategy has been copied regionally and internationally, with delegations from Japan and Nepal being sponsored by the Japanese International Cooperation Agency to observe and learn from BRAC's experience in instituting community-based DOTS. The success of BRAC's projects

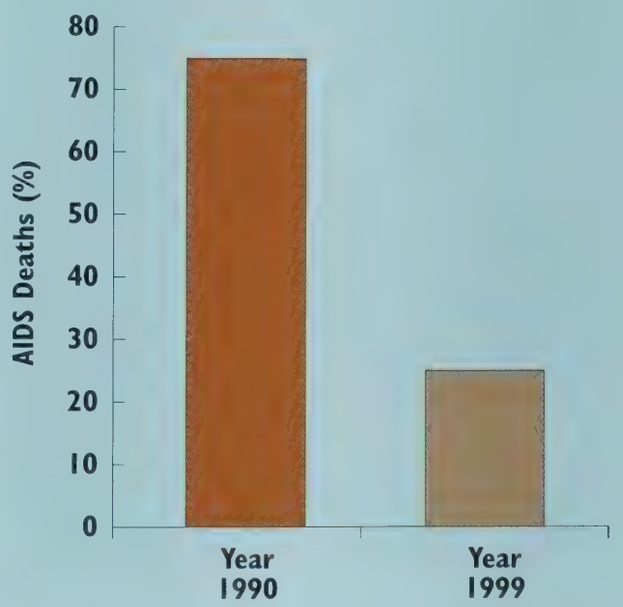
has been instrumental in mobilizing additional funds to expand services and to gradually cover rural areas throughout the country. With the rise in HIV/AIDS, BRAC has developed the capacity to deliver disease-awareness campaigns and prevention strategies among the districts and communities it serves.

Botswana

In areas such as franchising, social marketing and contracting, governments can learn from the private-sector. In Botswana, the diamond mining joint venture, Debswana, is active in the fight against AIDS. Although rich in mineral resources, Botswana currently has the highest HIV prevalence of any country in the world with nearly 40% of the adult population estimated to be HIV-positive. The tide is now beginning to turn however, with some much-needed support from the private-sector.

Debswana, for example, agreed in May 2001 to cover 90% of the cost of treating its HIV-positive employees with life-prolonging antiretroviral drugs. As Debswana is also the country's largest private employer, it is hoped that this model will encourage other socially responsible businesses to follow suit. Such initiatives are receiving full political support from the government. Botswana's President is personally leading the crusade to save his people from the "threat of annihilation". This initiative has prompted the Government of Botswana to develop a policy that would lead to free ARV treatment in public hospitals for all who are suffering from AIDS.

Comprehensive HIV/AIDS prevention and treatment has reduced AIDS deaths in Brazil, 1999



Source: Government sources Brazil, 1999

Brazil

Drug-price reductions can be achieved through the production or importation of generic alternatives. For example, the Government of Brazil has a policy of universal access to antiretroviral drugs, which benefits nearly all AIDS patients in the country. From 1996 to 1999, thanks to antiretroviral therapy, the number of AIDS deaths was nearly halved in

Brazil and the incidence of opportunistic infections was cut by 60% - 80%. Without significant decreases in the cost of antiretrovirals, however, Brazil's universal access programme would not have been possible. The Government achieved these price reductions through the local manufacture of drugs that were not patent-protected, combined with bulk purchases of imported antiretrovirals and price negotiations with the producers. Between 1997 and 1999, many AIDS-related hospitalizations were averted, resulting in savings of nearly US$ 290 million. During this period, condom sales also doubled.

Brazil allocates US$ 450 million each year to providing free antiretroviral treatment. In Asia, Thailand's dramatic reduction in HIV infection rates is also largely due to government financing of most HIV/AIDS control programme activities. In 1997, the country's budget for these activities had reached US$ 82 million – more than US$ 1 per capita. Even this underestimates the magnitude of country-mobilized funds: as early as 1991, private businesses alone contributed an estimated US$ 80 million towards fighting AIDS in Thailand.

Cameroon

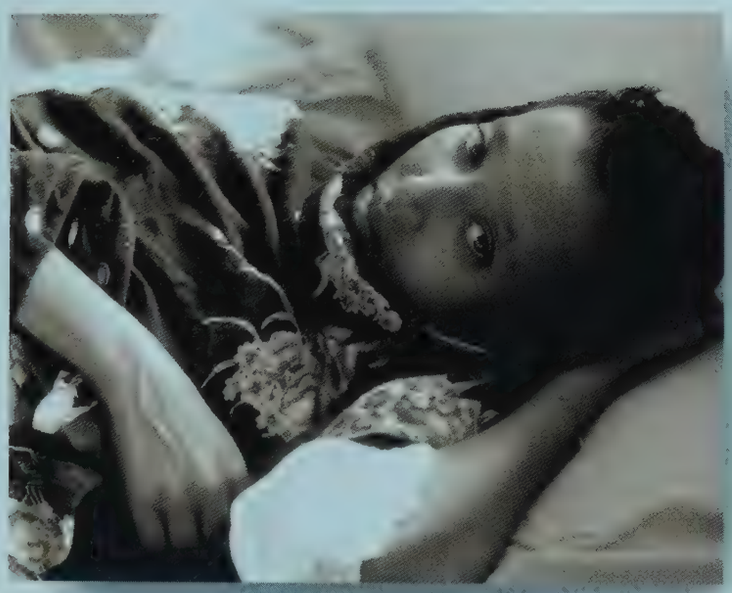
In sub-Saharan countries, where public spending on health is low, increasing spending on health services in rural areas is an important element in poverty reduction. Most countries involved in poverty-reduction strategies are already channelling debt-relief funds into control of the main infectious diseases. In Cameroon, where more than 50% of people live below the poverty line, the control of HIV/AIDS has been identified by the Government as one of the primary means of reducing poverty. An estimated US$ 2 billion in debt-relief funds will be directed to improving social services for supporting HIV/AIDS work, and also for increasing vaccinations, controlling malaria and completing a health map of the country. The Government of Cameroon has explicit policies and strategies for tackling HIV/AIDS, and is committed to preventing the further spread of the disease. It is offering finan-

cial incentives to health professionals as well as educating staff to treat people living with HIV/AIDS and STIs. Arrangements are being made to improve the procurement and overall delivery of drugs and supplies.

Cameroon's chance came during the early consultative stages of the World Bank, IMF HIPC process when local NGOs and donors were asked to contribute towards the HIV/AIDS strategy, opening the way for future collaboration. The private-sector was also involved in comanaging and cofinancing health services. For example, the Cameroon Development Cooperation (an agro-industrial business), and the Cameroon Aluminium Company have set up prevention and awareness-raising campaigns. In addition, closer links were forged with a number of partners, including bilateral donors, development banks and UN agencies. This process motivated the donor community to increase its resources for tackling other major infectious diseases through existing programmes such as Roll Back Malaria, Stop TB and the Global Alliance for Vaccines and Immunization (GAVI).

Indonesia

Some governments are introducing new human-resource development approaches, including combining staff with different skills, decentralized recruitment, financial incentives, performance-based pay and civil-service reforms. In Indonesia, a new system of financial incentives, which offers civil-service appointments to doctors willing to work in remote areas, has proved successful in attracting doctors from urban centres. A payment-for-performance system has also been introduced which rewards knowledge and professional performance and has boosted both transparency and motivation. The creation of semi-autonomous public hospitals has also had the effect of decentralizing control to the level of district and primary care centres. Working together with local NGOs and civil society organizations, these centres have been able to deliver services that better reflect the needs of the local population.



Kenya

Creating local markets, bringing new sources of income to local communities and linking these initiatives to improved health is critical as a supplement to government services. In Kenya, for example, the African Medical and Research Foundation (AMREF), together with the pharmaceutical company GlaxoSmithKline, has successfully promoted the use of insecticide-treated nets by linking it with the establishment of a local income-generating industry.

In this innovative project, community groups were trained to sew and sell ITNs. An extensive health-promotion campaign sponsored by GlaxoSmithKline got sales off to a good start, and over a four-year period more than 5 200 nets were produced. Coverage in the local communities of some 75 000 people expanded from 14% to 20%. Looking for a way to link community-based manufacturing to established local industry, AMREF held consultations with the local authorities, the Ministry of Health and local businesses, and then launched the Employer-Based Malaria Control in Coastal and Western Regions of Kenya project. Promotional activities were so successful that the initial demand for nets outstripped supplies.

Kenya is also modelling cost-effective methods for drug procurement. Bulk purchasing is now done through a local procurement and distribution agency. This method has produced a 40% saving on annual drug expenses. Regional cooperation has also proved effective in other parts of the world. For example, the Eastern Caribbean Drug Service representing six countries achieved a 44% average price reduction for the top 25 drugs in the region.

Somalia

Fourteen international NGOs and two local authorities, with the coordination and support of WHO, collaborated to provide a remarkable example of how health services

can be developed and a disease such as TB managed successfully even during complex emergencies.

Somalia has been suffering from ongoing civil strife. Establishing and delivering health services during complex emergencies of this nature is a challenge. Collaboration among international NGOs, local authorities and WHO made it possible to develop and deliver effective services to manage TB.

TB is highly endemic in Somalia and is one of the leading causes of morbidity and mortality. Aside from security, TB in Somalia is reported to be the greatest barrier to stability and economic development.

Through this partnership, TB diagnostic and treatment services were made available, and DOTS was introduced in 22 health facilities in 15 out of 18 regions. These services have enabled the detection of more than 23 000 cases of TB and cured more than 85% of them between 1996 and 2000. This shows how health services can be developed during complex emergencies and how a disease of poverty can be successfully managed.

Local NGOs and community groups play a central role in HIV/AIDS care, support and prevention activities.

Uganda

The process of developing sectorwide approaches has gathered momentum in several African nations where they are the preferred mechanism for strengthening district and primary health care services. Resources have been invested in their development and are bearing fruit in terms of improved strategic planning and financial control, wider political support and country ownership. In Uganda, the Government has demonstrated a commitment to building health-organization and management systems and to developing a sound legal and regulatory framework in health care. Minimum health care packages have been developed and access to services improved through construction and upgrading of primary health care centres. Funds channelled to primary health target "best buys"– cost-effective inter-

ventions which benefit the poor – have been used to increase immunization coverage, distribute insecticide-treated nets and antimalarials, expand awareness of HIV risks and increase condom use by vulnerable groups. The Government has also established HIV/AIDS coordination mechanisms at central and district levels that are reviewed quarterly by donors and civil-society organizations.

Key in reducing Uganda's high HIV infection rates has been a remarkably high level of political commitment – spearheaded by the President himself – to prevention and care, involving a wide range of partners across all sectors of society. A large number of local NGOs and community groups have taken up HIV/AIDS care, support and prevention activities, with people living with HIV playing a leading role. In addition, a creative social marketing scheme boosted condom distribution to over a million and condom use from 7% nationwide to 85% in urban areas within the short space of a decade. Another innovative scheme is a self-treatment kit for sexually transmitted infections (STIs). Shopkeepers who sell the kits over the counter at low, subsidized prices are also trained in STI management strategies. Yet another Ugandan innovation was the 1997 introduction of same-day voluntary counselling and HIV testing services. The combination of education and action has helped reduce the country's HIV infection rates even while the rates of neighbouring countries are still spiralling upwards.

Prices for essential drugs can be lowered if governments reduce import duties, customs and taxes, and remove unduly restrictive regulations.

Uganda has also taken significant steps to address malaria. Prices for essential drugs can be lowered if governments reduce import duties, customs and taxes, and remove unduly restrictive regulations. In a recent move to ensure malaria protection for millions of children and adults, Uganda and 12 other African countries – Cameroon, Côte d'Ivoire, Ghana, Kenya, Mali, Mozambique, Namibia, Nigeria, Sudan, the United Republic of Tanzania, Zambia and Zimbabwe – reduced or abolished taxes on insecticide-treated nets to make them more affordable. Previously, tariffs constituted 30% - 40% of the retail prices of nets.

MOBILIZING HEALTHY BEHAVIOUR

The control of HIV/AIDS, TB and malaria is now arguably more a political and communications challenge than a scientific or medical one. The medical and technical solutions for the major infectious diseases exist. The real challenge is to mobilize political and social capital to ensure these interventions are used widely and well.

It is not enough to have condoms at hand. It is not enough to have widespread knowledge about HIV/AIDS and how to prevent it. The knowledge has to be applied.

Only half the job is done in tackling diseases of poverty if we rest once effective health interventions are made available on a massive scale through upgraded and greatly expanded health service systems. We may bring superb health interventions to the very doorstep of those affected, but it is only with the adoption and maintenance of related healthy behaviours that will we be able to contain the ravages of the major infectious diseases.

The foundation for having people adopt healthy behaviour is knowledge, once the required health services or products are within reasonable reach. The World Bank's World Development Report 1998/1999: *Knowledge for Development,* drew particular attention to the importance of knowledge acquisition in reducing poverty. Yet 50 years of public health experience resoundingly point to the inadequacy of such an approach if it ends there. What is central to adopting healthy behaviour is the application of knowledge in the complicated context of culture, social norms, and a variety of social influences.

In reality, knowing what to do is quite different from doing it. The health field abounds with examples of how "knowledge" in itself fails to prompt desired behavioural results. Increased awareness and education about healthy behaviour have notoriously been insufficient bases for individual or family action, though they are essential steps in the process towards practising healthy behaviour. Regrettably, an informed and educated individual is not necessarily a behaviourally responsive individual. It is only with strategic, people-centred, behaviourally-focused social mobilization and communication that health interventions will move from the shelves to people's daily lives. This needs to be given the same devoted attention that the private-sector has bestowed on what it calls consumer communication.

Drugs, health centres and knowledge are not enough

The most fundamental challenge in confronting the major infectious diseases of HIV/AIDS, tuberculosis and malaria is convincing individuals, within the context of their families and communities, to adopt and maintain healthy behaviour. But this challenge is often assumed to be met once "everything else is in place", once the "enabling environment" exists, once the health services are there and the health interventions available.

Quality health systems, trained staff and health services and products should be in place. Condoms cannot be used if these are not available; mothers cannot treat their children's fever with antimalarial drugs if they are not within reach. Insecticide-treated nets will not be used unless they can be obtained fairly easily and at reasonable cost. What is so frustrating is the realization that superb medical or technical solutions to health problems do not sell themselves, even when readily available.

When nets are available, what could be easier than having that family sleep under a net? What is so difficult about ensuring people regularly swallow a few readily available drugs to rid themselves of TB? But the deceptive simplicity of these expected behaviours bedevils us. In the province of Sumatra, Indonesia, the Ministry of Health spent much effort and money to establish a substantial network of health clinics and subcenters with a midwife in almost every village. Yet health officials still wonder why these facilities are so underused and why traditional birth attendants continue to draw far more people than the trained and familiar village midwife.

People who know they are sick with TB and who know there are drugs to cure them do not jump at the mere availability of TB drugs. TB programmes are constantly challenged by the phenomenon of inconsistent drug consumption, even when clients are fully informed and seem to understand the need for maintaining a strict regimen.

HIV/AIDS: knowledge vs behaviour

HIV/AIDS research conducted in 1999 for the Mothusimpilo Working-Together-for-Health Project in South Africa, which focused on Khutsong, an area with a high prevalence of HIV/AIDS, showed the sharp contrast between knowledge of condom use for protection from HIV/AIDS and actual practice among women and men.

A high proportion (about 85% of men and women) understood that using condoms would protect them against the risk of contracting HIV/AIDS. Yet only 37% of men and 27% of women in Khutsong used a condom with their last casual partner.

Two key issues emerged from the research: firstly, "knowledge" is there but it is not consistent with behaviour and secondly (and this may explain the resulting behaviour), there is a lack of perceived risk. The idea that "it couldn't happen to me" prevails. Among women about 70% said they either did not know the risk or felt there was no chance of getting infected. Among men, the percentage was 64%. Others felt they had a moderate or good chance of getting infected. Those who did want to know their HIV status were offered free testing and counselling but it was not taken up. Studies among gay communities in San Francisco have shown that only when three or more personal friends started dying around them did people realise there was a problem and that they should be taking some kind of preventive action.

In malaria-endemic parts of sub-Saharan Africa and India, the behavioural response to a possible malaria fever is more often a shrug and "ride it out" until it is too late. People have been living with these fevers for generations; so why worry now, they conclude. Stockpiles of nets are meaningless if families fail to appreciate the value of owning them and sleeping under them. Sleeping under a net is often seen as quite burdensome.

Abundant access to condoms matters little if people are unwilling to use them. In southern Africa and the Caribbean, two regions with the highest rates of HIV/AIDS infection, field reports suggest that the behaviour of being faithful to one's partner is snappily dismissed, despite widespread familiarity with the causes of AIDS and extensive dissemination of the message "Be faithful". In circumstances of high HIV/AIDS prevalence, where condoms are relatively easy to get and where most people understand their HIV/AIDS preventive function, the consistent use of condoms in sexual activity is no more than about 20% at best.

RESOURCES FOR MOBILIZING HEALTHY BEHAVIOUR

The control of HIV/AIDS, TB and malaria is arguably now more a political and communications challenge than a scientific or medical one. The medical and technical solutions for the major infectious diseases exist. TB can be cured by available drugs; HIV/AIDS can be prevented when communities mobilize to support behaviour change; and the malaria burden can be reduced by available drugs and the use of insecticide-treated nets. The real challenge is to mobilize political and social capital to ensure these interventions are used widely and well. Unfortunately, most of the resources required for planning and implementing behaviourally-focused social mobilization and communication programmes remain untapped. Consequently, we continue to

make only a marginal difference in addressing the behavioural challenges posed by diseases of poverty.

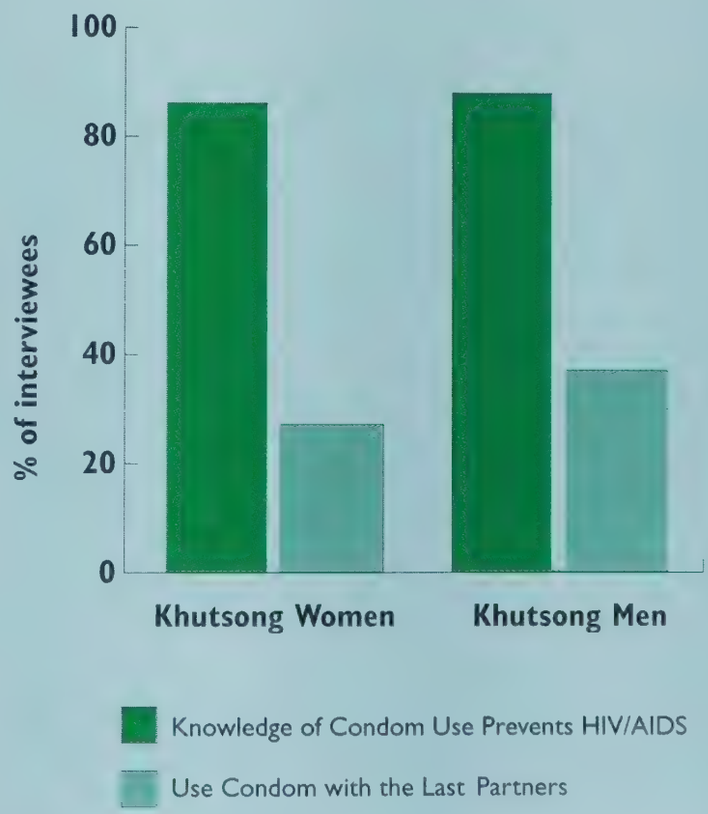
Political will

A key resource in pursuing behavioural goals in national disease prevention programmes is good, old-fashioned "political will". It may have become a cliché of development rhetoric, but dynamic national leadership can transform moribund intent into sparkling endeavours. The late James P. Grant, former Executive Director of UNICEF, had a visionary grasp of the importance of political will and advocacy for children's issues as became evident in the success of universal child immunization as he pressed government leaders into action-expressed commitment. When national leadership expresses a vigorous, impassioned commitment to tackling health problems and lends substantive support to field programmes, then individuals, families and communities are propelled into action.

The often-cited examples of inspired national leadership in the fight against HIV/AIDS are worth repeating. The political leadership of Brazil, Senegal and Uganda have shown how leaders can drive national movements to take concerted action against HIV/AIDS. The success of Thailand's HIV/AIDS prevention is the result of strong political commitment supported by dedicated and coordinated government action involving many partners. Likewise, success by Nepal and Peru in controlling tuberculosis has been primarily due to high-level political support.

The evidence is clear that the control of HIV/AIDS, TB and malaria is not a politically insurmountable challenge. Governments in poor and affluent countries alike have demonstrated the capacity to stage multibillion dollar Olympic and football competitions and enact extraordinary safety measures to protect their citizens from health threats such as plague or "mad cow disease". They also have the political capacity – if not yet the will – to turn back diseases of poverty.

Condom knowledge and people's behaviour
(75 000 interviewees)



Source: A biomedical and social survey, Carletonville, Johannesburg, 2000

With political will comes one key essential resource: Money. There is a prevailing view among government agencies and NGOs that effective advocacy and social mobilization projects can be done on the cheap. The private-sector experience with consumer communication tells us otherwise: if it is to be done well, it is an expensive exercise. For every dollar cost of a bottle of perfume, as much as 70 cents is spent on promotional communication. In the health sector, it would be rare to find even 15 cents on the dollar spent on communication and education. Scaling up interventions to massively confront the major infectious killers will require substantially increased financial resources for behavioural social mobilization programmes. Without this, our medical and technical solutions will sit patiently in our store-rooms.

Consumer communication and marketing expertise

Paradoxically, while most politicians have an innate understanding of the importance of strategic mobilization and communication in an election campaign, the bureaucracies they eventually manage frequently lack this sensibility in meeting social development objectives. The media visibility once coveted by a politician when campaigning for office becomes feared and dreaded once the elected official is in the position of maintaining the office. Creativity – once valued in preparing political campaign advertisements – is thwarted when applied to government public service announcements that must face bureaucratic and political realities.

Currently, a large share of health promotion and communications activities is managed and designed by government offices and global, intergovernmental agencies. With so many forces encouraging staff cautiously to embrace the status quo, many government health programmes end up conducting tepid health promotion strategies designed to cause the least offense to the smallest number of people. This is most evident where health education departments become confined to producing posters, pamphlets and T

shirts. When a senior health official asks about the status of an I.E.C. (information-education-communication) effort for prevention of a particular disease effort, he or she is usually asking "Where are the posters, the banners, the caps?" This fascination with communication materials distorts a highly disciplined process for the strategic design of programmes intended to engage people in fresh consideration of healthy behaviour and associated knowledge.

The ability to plan and use communication effectively for behavioural impact in development programmes calls for a special expertise which is not readily available in the public sector. By comparison, the private-sector has a rich tradition of marketing, promotion, consumer communication and a demonstrated track record of changing personal behaviour. For example, over the past decade, massive marketing strategies have successfully convinced Americans to pay nearly US$ 1 a bottle for a third of the water they drink – rather than drinking it free from the tap. Certainly, the same magnitude of marketing and consumer communication resources and expertise will be required to convince 100 million Africans to spend one third of their day under an insecticide-treated net. While a net is not the same as bottled water, the process and methodology of consumer communication to promote their acquisition and use are the same in both instances.

This private-sector consumer communication resource needs to be better tapped for health programmes. Currently, however, it remains a poorly-used resource, at both global and country levels, partly because the language of consumerism is often not palatable to those in the field of social development. Yet even the poorest people in a society are consumers. Key consumer research and communication methods are increasingly used in development communication programmes. For example, focus group discussions, target audience segmentation, audience analysis, and knowledge, attitude and practice studies are now accepted as essential for understanding what communication interventions are needed and how and when to apply

them. "Social marketing" of subsidized health products has shown some impressive results in the promotion of condoms in family planning and nets for malaria. Concerted efforts are now called for to engage a large cadre of private-sector marketing and communications professionals to design and implement effective people-centred communication programmes. With this resource we are more likely to escape the "poster production" mode of hoping for behavioural impact.

Networks of people and organizations

A potent resource which is almost always available and which should be used more often in healthy behaviour efforts is that of existing people's organizations and networks. In almost every community there are organizations and structures that shape social life and conversation and that influence individual and family actions. These may be churches, mosques, temples, village councils, social clubs, civic groups, youth groups, women's groups, nongovernmental organizations, service clubs such as the Rotary and the Lions, parent-teacher organizations, trade unions and employer confederations, among others.

Women and children are often the most burdened by disease and ill-health, but have the least say in decision-making and limited access to care. Yet when women's networks are provided with the tools to help themselves, there is an immediate impact on their health and the health of their families and communities. For example, in the Tigray region of northern Ethiopia, mothers were recruited to teach other mothers how to diagnose and treat malaria at home, supported by a network of health volunteers. They effectively ensured that malaria drugs were available to treat the disease before it became life-threatening, especially in very young children.

Another powerful and underused resource is the school system, with the teachers and students who can be engaged

advocates in the home and community for recommended healthy behaviour. There are ways of tapping into this rich resource without necessarily adding a major school health education curriculum to an already overburdened system. For example, a student taking home a single-page fact sheet on malaria and insecticide-treated nets (which would have been reviewed in the classroom) can be the start of a reading and discussion exercise at home on the subject with significant behavioural consequences.

Media access

Media resources are widely available in most countries; radio is often the dominant mass medium but in more and more countries television has taken over. Government ownership of electronic media resources in many countries ought to lead to more extensive and strategic use of these media for key diseases, but usually it does not. Where they exist (as they do in many countries), community radio stations can be a potent medium for fostering local engagement in health initiatives. Their community-based management and programming operations allow for tailoring broadcasts of immediate relevance to listeners. This is also a matter of political will and dynamic national leadership; the currently available media infrastructure and resources in most countries can be used much more effectively. This calls for presenting to media managers, both in the public and private-sectors, a professionally developed and coherent media plan and involving them in a review of these plans.

There is a wealth of messengers in communities with the power to draw attention and foster a supportive environment. When used with the mass media these voices can put healthy behaviour on the national public agenda.

Another local resource in every country is the ready availability of powerful and credible voices. When used with the mass media, these voices can put healthy behaviour on the national public agenda. There is a wealth of messengers for messages, from the articulate but little known to the celebrity with the power to draw attention and foster a supportive environment. Archbishop Desmond Tutu, for example, has been a powerful voice in promoting behaviour to prevent HIV/AIDS in South Africa, despite his pro-

fession he spearheaded the use of the word "condom" on radio and television.

STRATEGIES

The leap into behavioural responsiveness calls for engaging people, through a deliberate process of behaviourally-focused social mobilization and communication, in reflecting on acquired knowledge in relation to personal benefits, societal norms and influences and prompting consideration of action on the basis of this engaged reflection.

We have extensive knowledge about shaping political and cultural behaviour. We have decades of modern political campaigning experience that have yielded lessons for how to most effectively promote candidates and party platforms. And we have consistent findings from similar efforts to promote social issues, both as legislative initiatives and social causes.

We also have extensive knowledge of how to encourage healthy behaviour. We have 100 years of consumer communication experience and research in the private-sector which have demonstrated what works in engaging consumers in applying knowledge for very specific consumer behaviour, in relation to products and services both sublime and awful, from toothpaste to banking to tobacco. And we have the consistent findings of more than 50 years of communication research and experience in social development, and health education and promotion.

In all instances, there is no magic bullet, no single communication intervention that will produce behavioural miracles. Always, an integrated, judicious blend of a multitude of communication actions implemented in a massive, repetitive, intense, persistent, and engaging manner does make a difference in increasing healthy behaviour among risk groups and healthy policy action among decision-makers. In the most effective health communications initiatives, efforts to

influence political behaviour work synergistically with efforts to influence personal health behaviour, as reflected in the successful family planning programmes in Colombia, Mexico and Egypt among others.

Influencing political behaviour: Creating a C.A.U.S.E. for changing society

Communication strategies for influencing political behaviour should be informed by what we have learnt from world social movements. To globalize public opinion, we need to create a C.A.U.S.E. with high profile celebrities, energizing activities, attention surrounding unexpected scandals, memorable symbols and defining events. The C.A.U.S.E. elements attract public attention to a problem and mobilize efforts to find a solution. Above all, they put key issues on the public agenda.

Not every social movement requires all five elements in order to succeed. For example, the visible involvement of Diana, Princess of Wales was sufficient to propel the campaign to ban land mines on to the international political agenda without, for example, the popularization of a campaign symbol. The visible advent of one or more of the C.A.U.S.E. elements makes it easier for a movement to generate other initiatives. For example, the initial success of the

Creating a C.A.U.S.E.

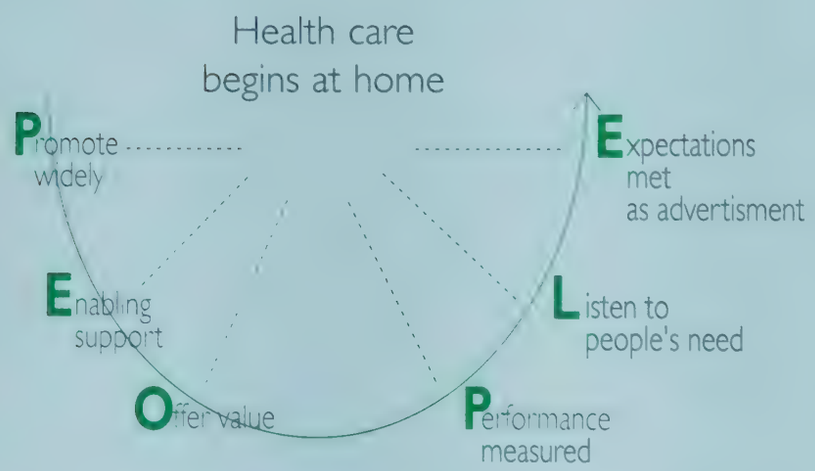
	Celebrity	Activity	Unexpected Story	Symbol	Event
AIDS in the United States	Ryan White Magic Johnson Rock Hudson	ACT-UP zaps	Contaminated blood supplies Reports of heterosexual transmission	Red ribbon Quilt	World AIDS Day
Civil rights in the United States	Martin Luther King Rosa Parks	Sit-ins	Medgar Evers murder	"I have a dream" Hooded klansmen	Montgomery bus boycott 1963 march on Washington Watts riots
Anti-apartheid in South Africa	Nelson Mandela Desmond Tutu	Construction of mock shanty towns Divestment campaigns	Sharpeville massacre Murder of Steve Biko	African National Congress colors	Sun City
Independence movement in India	Mahatma Gandhi	Fasting Passive resistance	Jallianwala Bagh atrocity	Spinning wheel	1930 salt march
Childhood immunization	Goodwill ambassadors Audrey Hepburn Harry Belafonte	National immunization days	Publicity by UNICEF national committees	Moni symbol in Bangladesh	Bellagio Conference World Summit for Children

Source: Reichman,B and Hershfield,E:Tuberculosis:2000

Band Aid concert and the song "Do They Know it's Christmas?" in 1984 stimulated other activities to address world hunger, such as the involvement of additional celebrities and corporations in LiveAid and Hands Across America follow-up events. Effective social movements usually have a bandwagon effect, compelling an increasing number of individuals to become involved because of the apparent popularity of the cause.

The C.A.U.S.E. elements also appear in successful initiatives to mobilize a social response to other important health issues, such as reproductive health and child survival. For example UNICEF's social mobilization initiatives in any given country have effectively involved celebrities such as the late Audrey Hepburn and Harry Belafonte to promote child survival programmes. International associations such as Rotary, Junior Chamber and Kiwanis have provided a volunteer base in developing countries to conduct special activities during national immunization days. National committees in 37 industrialized countries have supplemented UNICEF's advocacy activities in publicizing the unexpected scandal of childhood mortality. At the country level, symbols have helped promote immunization. Political leadership has been galvanized at events such as the Bellagio Conference and the World Summit for Children.

People-centred approach for enabling healthy behaviour



Influencing personal/community healthy behaviour: Being P.E.O.P.L.E.-centred

The private-sector's dedication to being consumer-focused points the strategic way to influencing personal/community health behaviour. By putting them at the centre, such programmes increase people's control of their own health. A P.E.O.P.L.E.–centred approach to enabling healthy behaviour is characterised by 6 action components:

The first component is to **promote** extensively the recommended health behaviour and ensure that the necessary information for a proper appraisal is widely available.

Prominent voices – from celebrities and civic leaders to trusted peers – have tremendous power in influencing personal behaviour. Whether the behavioural goal is to persuade people to wear seat belts or to use condoms, the success of public health campaigns depends on the degree to which astutely-crafted messages are promoted by credible voices.

Action must be directed to **enabling** support from important social and cultural traditions and institutions. For example, women's health-seeking behaviour has a substantial benefit for children and the family. But when their voices and very presence are marginalized, both in society and in the home, opportunities to involve them in considering suggested behaviours are diminished. Conscious and deliberate communication action is required which not only purposefully seeks out women's participation, but also addresses the transformation of institutions, practices and traditions which present barriers to their participation.

A third component is to **offer value** in relation to the "cost" involved in carrying out the healthy behaviour. People need to see that it is "worth the effort" to accept a suggested behaviour, that there is value in making the behaviour part of their lives. Every behaviour adopted is based on this personal calculation of "cost" versus value. And for some the value offered is enhanced when an incentive is also part of the offer. This may take the form of promoting an offer of food for those who must incur the significant "cost" of time to come for tuberculosis treatment (as was done in Peru).

The fourth is to have a rigorous measure of **performance** to track the behavioural impact of social mobilization and communication activities. Without this it will not be possible to determine whether the behavioural results that are being sought are achieved.

The fifth is to **listen** to people (by way of research and personal and community engagement) so that a sensitive understanding of their concerns, preferences, needs,

desires, attitudes and behaviour informs the interactions with them. The world of consumer communication is full of case studies of market failures due to not listening to the consumer and not responding to their concerns and preferences.

The sixth is to ensure that **expectations** are met in the practice of a recommended healthy behaviour, that the promised value offered in relation to cost is delivered and to reiterate it in a reconfirmation of the merits of the behaviour adopted. This is an important part of the process of maintaining adopted behaviour.

The COMBI approach

In exploring a way to integrate the communication lessons of the past as reflected in the C.A.U.S.E. and P.E.O.P.L.E.-centred approaches. WHO has been applying a concept called "COMBI" (communication for behavioural impact) in the design and implementation of behaviourally-focused social mobilization and communication programmes. Recently this has been used for the elimination of leprosy in India and Mozambique, the prevention of lymphatic filariasis in India and the United Republic of Tanzania, and dengue prevention and control in Malaysia. It is an approach which may be well suited for achieving behavioural impact in confronting HIV/AIDS, tuberculosis and malaria. COMBI interprets social mobilization as the process which judiciously and strategically blends a variety of communication interventions intended to "mobilize" the societal and personal influences which prompt an individual to adopt and maintain a particular behaviour.

COMBI, drawing on consumer communication experience, begins with the "people" (clients, patients, beneficiaries, consumers) and their health needs, wants, desires, and a sharp focus on the behavioural result expected in relation to these needs, wants, desires. The "market/community" is intimately involved from the outset through practical, participatory community research and situation

analysis relating desired behaviour to expressed or perceived needs/wants/desires. This situational analysis also involves listening to people and learning about their perceptions and grasp of the offered behaviour, the factors which would constrain or facilitate adoption of the behaviour, their sense of the costs (time, effort, money) in relation to the perceived value of the behaviour to their lives. People are then engaged in a review and analysis of the suggested healthy behaviour through a judicious blend of integrated communication actions in a variety of settings, appropriate to the "market" circumstances and based on community research, recognizing that there is no single magic intervention. The blend of communication actions include advocacy and public relations, administrative and community mobilization, sustained appropriate advertising, interpersonal communication/counselling and point-of-service promotion. The 2001 Malaysia Dengue communication programmes in Johar Bharu was an impressive example of COMBI in full action. Preliminary results show an 87% behavioural response to the public message of "Check your home every Sunday for mosquito breeding sites".

MODELS

Behavioural impact is achievable when strategically planned social mobilization and communication programmes are properly executed. In the public sector world of healthy behaviour, there are not many examples to draw on, primarily because not many behaviourally-focused social mobilization and communication programmes have been implemented in a substantial way. In the private-sector consumer world, however, there are thousands of success stories that can serve as models. In the field of dental hygiene, the massive marketing communication efforts of toothpaste manufacturers have made brushing one's teeth a daily habit for most people almost everywhere. AVON sells vast quantities of its cosmetic products in the Amazon region of Brazil,

The value of healthy behaviour campaigns

Use of condoms among brothel-based sex workers in Cambodia following "100% condom use" campaign

more so than in Sao Paulo, through its door-to-door selling approach.

Cause-related marketing in affluent countries

There are numerous examples of the business community lending both financial and promotional support to social development causes. This practice has become increasingly popular, both to the advantage of the corporations and the social cause they support. Cause-related marketing (CRM) is a strategic positioning and marketing tool which links a company or brand to a relevant social cause or issue, for mutual benefit. For the company it is a way of enhancing their image, gaining loyalty and increasing sales. For the social cause or issue it is a way of raising public awareness and prompting action to support the particular issue.

American Express and Share Our Strength (SOS), a non-profit organization tackling the problem of hunger in the United States, formed a strategic alliance and created one of the best known and most successful CRM campaigns in that country – Charge Against Hunger. It raised about US$ 5 million per year and helped put the issue of hunger in the United States higher on the public agenda. American Express' human and financial resources were mobilized as employees volunteered to organize events, staff soup-kitchens and coordinate food drives. Celebrities such as Stevie Wonder and Hillary Clinton took part in musical roadshows and events across the country.

In Italy, Proctor & Gamble joined with the charity Action-Aid to raise money to help supply clean water to Dalocha in Ethiopia. The campaign raised US$ 1.8 million at the same time as improving the brand image of one of their products – Dash washing powder. The centrepiece was an in-pack promotion leaflet, cassette or CD depending on the product packaging, asking customers to donate money. The cassette and CD had songs contributed by Italian pop stars. The programme filmed ACTIONAID activities in the

field and used some of the footage in TV adverts. The campaign was also promoted on popular prime-time TV programmes using a well-known personality. In fact, even viewers who did not buy the product still donated to the campaign.

An example of a long-term and cost-effective partnership is the alliance between UNICEF and British Airways in the "Change for Good" initiative. The programme is promoted on in-flight videos, using images of children and cards, asking passengers to donate any loose change from their trips that they no longer need in small envelopes provided on the back of the seats. So far, it has raised US$ 7 million for UNICEF's activities.

These examples are part of an emerging enthusiasm for corporate linkage to social causes. We must now channel this enthusiasm towards behavioural goals in health. The business sector can be of immense value as we tackle the major infectious diseases. Here too there is a need for organized engagement of the private-sector with the presentation to business leaders of an effectively structured "case for support" and creative ideas for how they can help. This is more than asking for a financial contribution; it is asking business to commit to a long-term collaboration with a disease effort. One, of course, has to be mindful of the need for transparency, accountability and avoidance of conflict of interest in such joint enterprises.

People's networks in South Africa, Thailand and Indonesia

There are hundreds of examples of health programmes mobilizing "people networks" resulting in dramatic behavioural impact. Many polio immunization and leprosy elimination programmes have been successful as a result of the involvement of people's networks.

A strong community network became the key to the success of DOTS for TB control in Sanderton, South Africa. It began with a group of women who came together, recognized that there was a problem, and began working to tackle it as a group. The mainstay of the initiative is the 75 volunteer "treatment supporters" who have been trained since the programme started in 1996. A central map with little flags marks the location of patients currently being treated and is a visual reminder that once patients begin treatment they are followed through until completion of the entire regimen. When the programme began only 4% of patients were covered but now it includes virtually 100% of TB patients in the district and the documented cure rate among the initial group of patients is well over 80%. These volunteers now also carry out general health promotion including the distribution of condoms to protect against HIV and sexually transmitted infections.

Thailand used the existing infrastructure of village committees at the district and subdistrict levels to plan and implement leprosy elimination work. These committees of local people – called the tambon council – were supported by a working group of government officers from four key ministries. Health communicators were trained to deal with common health problems and recognize when to refer people for more specialized treatment. Leprosy was successfully added to the list of health problems to be addressed.

The Dokter Kecil programme in Indonesia is an example of how children can be motivators and promoters of better health in their families and communities. Children are selected to work as "little doctors" and are given about 20 hours of training in class. Their responsibilities include setting a good example by following a healthy lifestyle, active participation in environmental health, and communicating messages on diarrhoea, immunization and nutrition. The programme started as a pilot project 10 years ago and is now used throughout the country.

Immunization in Bangladesh

Many innovative and effective social mobilization campaigns have been conducted in Bangladesh. The following account is of a major child immunization communications programme which UNICEF and the Government of Bangladesh embarked upon in 1986. The result of this initiative was that by 1991, roughly 65% of children in the target age group were fully immunized.

One of the first elements of the communication programme was the search for a symbol which people would recognize easily. The Moni symbol was designed. Moni is a term of endearment for children of both sexes and a character was drawn to suit the term. Six arrows, representing the six vaccine-preventable diseases and a ring for protection were added. Moni became one of the most successful elements in communication of the Expanded Programme on Immunization (EPI). It was placed just about everywhere to raise awareness and prompt behavioural responses.

Print and electronic media were used extensively. National immunization weeks received massive press coverage and the Government provided three minutes per day of prime commercial time on radio and television. The Government also fostered intra- and interministerial collaboration of an unprecedented kind. Celebrities from Audrey Hepburn to Bangladeshi movie and television stars to popular cricket and soccer players lent their voices of support for EPI.

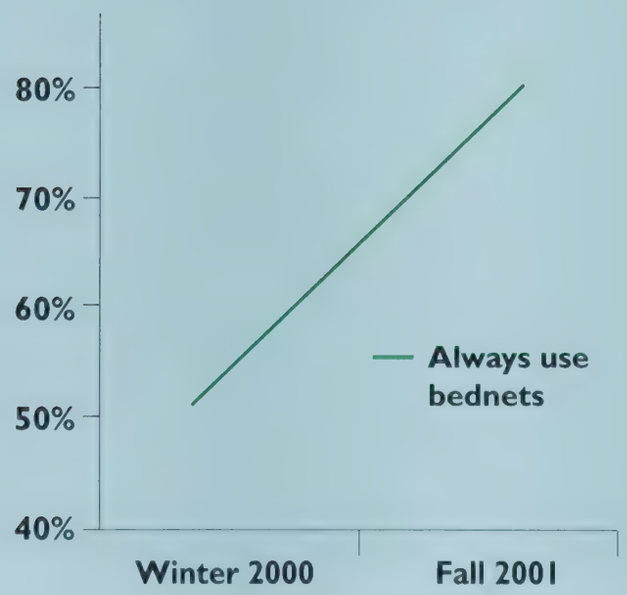
But what was truly remarkable was the extensive community mobilization and active support of an enormous number of partnering groups from local civic groups, to the Rotarians, CARE, Boy Scouts, Girl Guides, other social clubs, a variety of NGOs such as BRAC and World Vision, among others. And it was in these community actions that the many varied opportunities for "engaged communication" with families allowed for discussion of the merits of immunization, and where people's fears and concerns were discussed.

Local initiatives blossomed and played a major role. Boat sails, elephants, buses, rickshaws and many more vehicles and partners carried EPI banners. Vaccinators were supported in their interpersonal interactions with flip charts and flash cards, and EPI bookmarks for students. Village theatre and folk poets promoted EPI.

The private-sector joined with superb cause-related marketing actions. Dhaka Match Industries put the Moni logo on the back of 20 million matchboxes sold every month. This was followed by half a dozen other companies joining in support, linking the EPI logo to their products and services.

The value of healthy behaviour campaigns

Use of bednets in Blantyre district, Malawi following BITNET campaign



Source: PSI, Malawi 2001

Social marketing in Malawi and the United Republic of Tanzania

Social marketing (distribution, promotion and sale) of subsidised insecticide-treated nets (ITNs) in selected districts of Malawi and the United Republic of Tanzania has demonstrated that even the poor (earning less than US$ 1 per day) will bear the cost (US$ 4) of the purchase of a net if they are effectively engaged in a fair appraisal of this healthy behaviour. In the United Republic of Tanzania project the number of infants by district with insecticide-treated net rose from less than 10% in 1997 to more than 50% 3 years later. In Malawi, the percentage of houses with at least one net increased from 14% to 30% in urban areas and from 5% to 17% in rural areas within 9 months of the launch of the marketing effort. In both cases, extensive and intensive marketing communication based on market research and using a mix of traditional media, persistent mass media advertising, point-of-sale promotion, wall paintings, vigorous brand promotion, incentives to sellers, radio dramas, among other communication interventions, all played a vital role in engaging consumers in this healthy behaviour.

Sometimes personal selling or peer counselling alone can be the best way to achieve behavioural impact. In the private-sector, there are numerous products sold purely by

personal, door-to-door sales (e.g. Amway, Avon Cosmetics, Herbalife, Tupperware). A 1996 study in Bangladesh highlighted how home-based visits by community-based peer counsellors can transform breastfeeding behaviour. Prevalence of exclusive breastfeeding at 5 months reached 70% in the intervention group using community-based peer counsellors compared to 6% in the control group where there was no home-based counselling.

Massive programmes for engaging millions in a fair and full appraisal of healthy behaviours will cost millions. If we recognize that this is an enterprise which goes far beyond poster production there has to be a major global and national commitment to funding these initiatives in a far more substantial way than has ever been done.

Each of the major global infectious diseases have their own proven bio-medical tools to combat the diseases; and considerable social capital exists for behaviourally-focused mobilization. What is needed is commitment to a strategic model which blends the body of existing knowledge based on research and good practices from both private and public sectors into powerful, dynamic vehicles for social change and precise behavioural impact.

GOING TO SCALE

GLOBAL RESOURCES

As we stand at the dawn of the 21st century, there is unprecedented political momentum for dramatically scaling up the global response to the main infectious diseases, starting with HIV/AIDS, tuberculosis and malaria. At long last, political will – a key component for social change – has begun to coalesce around the interlinked concerns of poverty alleviation and the control of infectious diseases.

As we stand at the dawn of the 21st century, there is unprecedented political momentum for dramatically scaling up the global response to the main infectious diseases, starting with HIV/AIDS, tuberculosis and malaria.

Like all other resources, political will can either be used to advantage or disregarded. While political will is a prerequisite for massive global efforts such as those needed against diseases of poverty, alone it is insufficient to save a single human life if not followed up with specific action. If massive and successful action to expand effective interventions, extend health services and increase healthy behaviour are not forthcoming, political will can vanish as quickly as it appeared.

We live in a world in which personal wealth is greater than ever. Global trade continues to increase and expand. Information technology is bringing us into closer contact with each other than ever before. And yet almost 1.2 billion people, one-fifth of the world's population, subsist on less than US$ 1 per day, and the poorest 10% of the world's citizens share in less than one-half of 1% of global trade in goods and services.

In the poorest countries of sub-Saharan Africa, per capita government spending on health has fallen from US$ 11 a year in the 1980s to only US$ 8 a year in 2001, amounting to only 20% - 40% of the cost of what the World Bank regards as the minimum basic package of health and environmental services.

The developing countries of the world, where the majority of the poor live, are to a large extent excluded from international trade and investment, and foreign aid to these countries continues to fall. Over the past decade, financial

flows to developing countries have fallen by 39% in real terms; official development aid (ODA) has fallen by 45%; foreign direct investment to developing countries is now only 1.4% of the world's total; and the exports from these countries amount to only 0.4% of the total.

Even though developed countries have made commitments to provide 0.7% of their gross national product (GNP) for development assistance, only Denmark, Luxembourg, Netherlands, Norway, and Sweden have honoured their pledges. Current levels of total ODA stand at about US$ 50 billion per year, of which only about 7% - 8% – US$ 3.5- 4.0 billion – are devoted to health, nutrition and population. However, the real value of this assistance may be less, since much of it is provided in the form of earmarked aid and loans rather than grants.

Only a tiny fraction of resources for health in low- and middle- income countries is provided by international organizations. In 1994, for example, health spending in low- and middle- income countries totalled US$ 250 billion, of which only US$ 2-3 billion were from development assistance. By the late 1990s this assistance had increased to a maximum of US$ 4 billion per year, equivalent to about 8% of all ODA.

The magnitude of this calamity in developing countries has triggered unprecedented action by the international community, with pledges for massive financial and technical support. This is vital because only decisive action initiated by national governments and supported by a broad range of partners can begin to reverse this dire situation.

THE NEW RESOURCE OF POLITICAL COMMITMENT

New resolve to scale up the global response to the three major diseases of poverty (HIV/AIDS, tuberculosis and malaria) has been evident over the past two years. The agendas of a

series of international meetings have reflected a wave of unprecedented political support for health issues at the highest levels. A brief chronology of these meetings follows.

Ministerial Conference on Tuberculosis and Sustainable Development

March 2000, Amsterdam, Netherlands

Ministers of health, planning and finance from 20 of the 22 countries with the highest number of cases of tuberculosis met in Amsterdam to set targets for reducing the epidemic. The resulting Amsterdam Declaration called for scaling up at a quicker pace, more political commitment and additional resources to reach the global targets. The Declaration also requested assistance in developing national TB plans and greater research to develop new drugs. The Ministers pledged to expand DOTS coverage to reach at least 70% of all infectious TB cases by the year 2005. They also agreed to work with WHO to establish a Global TB Drug Facility in order to help make anti-tuberculosis medicines universally accessible and to develop a Global Investment Plan to further coordinate the efforts of governments and NGOs in implementing the DOTS strategy.

African Heads of State Summit on Roll Back Malaria

April 2000, Abuja, Nigeria

The Heads of State of 19 African nations met, along with heads of international development agencies, to declare war on malaria. Their Abuja Declaration called for quick action to ensure that at least 60% of those at risk of malaria are provided protection (such as insecticide-treated nets) and have access to treatment within 24 hours. Commitments were also made to protect pregnant women and children from malaria and to remove taxes and tariffs on nets imported into African countries. A report released at the meeting – prepared by WHO, Harvard University and the

London School of Hygiene and Tropical Medicine – showed that malaria has been hindering economic growth on the continent possibly by 1.3% each year, i.e. the GDP of African countries is currently 32% lower than it might have been had malaria been controlled two decades ago.

Summit of G8 Leaders
July 2000, Okinawa, Japan

After making HIV/AIDS, TB and malaria one of the top four agenda items of the Summit, the leaders of the G8 countries (Canada, France, Germany, Italy, Japan, Russian Federation, United Kingdom and the United States) pledged to take decisive action against the diseases. Signalling their commitment in their final communiqué, specific targets were endorsed for reducing the number of young people infected by HIV/AIDS by 25%, cutting tuberculosis mortality and prevalence by 50%, and bringing down the burden of disease associated with malaria by 50%, by the year 2010.

Massive Effort Advocacy Forum
October 2000, Winterthur, Switzerland

Nearly 200 leading advocacy and communications experts – primarily from NGOs and the private-sector, and from all parts of the world – met for four days in the Swiss city of Winterthur to discuss how to initiate a larger social movement to address diseases of poverty. They agreed to mobilize global, national and community advocacy networks to hold governments accountable to agreed-upon disease control targets and to increase the involvement of civil society in meeting these targets. Subsequently, dozens of these organizations have embarked on new activities to fight AIDS, TB and malaria.

African Summit on HIV/AIDS, TB and Other Related Infectious Diseases
April 2001, Abuja, Nigeria

Following on from the disease control targets adopted the previous year, impressive pledges were made during the

Unprecedented political support for HIV/AIDS, TB and malaria

Benefits from the Global TB Drug Facility

Preclusion of further TB drug resistance.
Rationalisation of procurement mechanisms.
Improved cost-effectiveness of drug purchasing.
Improved quality of TB drugs worldwide.
Creation of a successful model of commitment and cooperation to confront global epidemics.
Treatment of an additional 10 million patients by 2005 and 45 million by 2010.
Prevention of 25 million TB deaths and 50 million TB cases by 2020.

Abuja Summit of the Organization of African Unity (OAU) in April 2001. The UN Secretary General called for the creation of a global "war chest" for the control of HIV/AIDS, TB and malaria and requested US$ 7-10 billion annually in new funding for this purpose. In addition, 47 African Heads of State committed their governments to allocating at least 15% of their annual budgets to improving the health sector, and setting aside a substantial proportion of these funds to fight HIV/AIDS, TB, malaria and other infectious diseases.

UN General Assembly Special Session on HIV/AIDS

June 2001, New York, United States

The United Nations Secretariat convened a Special Session of the General Assembly on HIV/AIDS to address the pandemic at the highest political level. In focusing the world's attention on the epidemic, international action to fight the spread of HIV/AIDS and mobilize additional resources was intensified.

Summit of G8 Leaders

July 2001, Genoa, Italy

Responding to recent calls for increased financial support for scaling up efforts to control HIV/AIDS, TB and malaria, the Government of the United States became the first to commit resources – a US$ 200 million pledge – to the proposed new Global Fund to Fight AIDS, TB and Malaria. Subsequently, the United Kingdom pledged US$ 200 million, matched by Japan. France promised US$ 130 million and the International Olympic Committee, US$ 100 000 in the months leading up to the annual Summit of G8 Leaders. Other donations of US$ 100 million or more have followed from the European Commission, Germany, Canada and Italy. Nigeria has also pledged US$ 10 million to the fund, Uganda US$ 2 million and Zimbabwe US$ 1 million. In responding to the G8's call for the world's 1 000 leading corporations to each donate US$ 1 million, Crédit Suisse and its subsidiaries Winterthur

Group and Medvantis became the first private-sector partner to commit to this initiative. Additionally, the Gates Foundation announced a US$ 100 million commitment to the Fund, which it said should be used for innovative HIV/AIDS prevention efforts.

PARTNERSHIPS AND NETWORKS TO MULTIPLY SUCCESSES

The deaths, suffering and poverty caused by HIV/AIDS, TB and malaria worldwide call for a massive global response. An enhanced and expanded framework of partnerships and networks – involving governments, UN agencies, financial institutions, NGOs, private-sector partners and civil society – is urgently needed to deal with these three major infectious diseases. For maximum effect, impetus must come from both local and global players.

Such a strategy must be backed up by the necessary political and financial commitment. It is important that this global strategy should complement – not replace or negate – action by developing countries to build and strengthen their own health systems. The following are a few of the global initiatives that can help the world "go to scale" in addressing diseases of poverty.

Stop TB Initiative

The Stop TB Initiative has been set up to fight the global burden of TB and has developed a political and social movement against the disease by promoting the use of DOTS. The initiative is a partnership between countries with serious TB problems, UN agencies, NGOs, private industry and public health institutions. Stop TB functions through a process of consensus to agree on priorities and follow best practices. Its actions are conducted according to the comparative strengths of individual partners. It aims to increase access to treatment for TB patients, develop effective strategies to meet the challenges of multidrug-resistant TB and

The targets of Stop TB

2005: 70% of people with infectious TB will have been diagnosed, and 85% of those detected, cured.

2010: The global burden of TB disease – deaths and prevalence – will be reduced by 50% of year 2000 levels.

2050: The global incidence of TB disease will be less than 1 in 1 million people.

The targets of Roll Back Malaria

Halve the malaria mortality for Africa by 2010.
Initiate actions at country level to provide resources to facilitate realization of RBM objectives.
At least 60% of those suffering from malaria have prompt access to and are able to use correct, affordable and appropriate treatment within 24 hours of onset of symptoms, by 2005.
By 2005, at least 60% of those at risk of malaria, particularly pregnant women and children under age five years, benefit from the most suitable combination of personal and community protective measures such as insecticide-treated mosquito nets and other interventions which are accessible and affordable, to prevent infection and suffering.

the deadly link of TB and HIV, and promote the development of new drugs and vaccines.

One immediate priority is to expand the use of DOTS to all populations at risk, which is at the heart of the Global DOTS Expansion Plan of the Stop TB Initiative. The plan supports a scaled-up response by mobilizing human and financial resources as part of national health systems to achieve the TB targets agreed to by Ministers in March 2000 in Amsterdam.

The two pillars of the plan are the development of national strategies and partnership building to support public health efforts. The first stage is to identify country needs and resource gaps, including shortages of diagnostic supplies, drugs and staff. Next, health plans must be developed which are specifically aimed at increasing case-detection and cure rates to enable additional resources to be allocated efficiently and progress to be made towards reaching national targets. Strong partnerships are crucial for the success of the plan, since a large-scale improvement in TB control can only be achieved through collaboration among partners. As a priority issue, the Global DOTS Expansion Plan has calculated the financial resources needed to expand DOTS. Initial estimates for the 22 high TB countries with the highest burden of TB show that the basic investment required is between US$ 700 million and US$ 900 million each year.

To overcome the serious shortage of TB drugs in some developing countries, the Global TB Drug Facility was established during 2001 as a part of the Stop TB Initiative. This facility supports a large-scale response to TB control by increasing the availability of high-quality drugs and diagnostics at a low cost, and facilitating DOTS expansion. The Facility also provides pooled procurement services for countries and buffer stocks, and ensures quality control of drugs. It addresses the need to ensure uninterrupted global supplies of quality drugs, to catalyze rapid treatment expansion, to stimulate political and popular support in countries throughout the world for public funding of appropriate drug supplies, and to secure sus-

tainable disease control or even elimination. Together with the Global DOTS Expansion Plan, this is a major step towards applying the principles of the DOTS strategy on a larger scale.

Roll Back Malaria

The Roll Back Malaria (RBM) initiative was launched in October 1998. It has four founding partners; WHO, UNICEF, UNDP and the World Bank. This initiative is unique in that, unlike previous global campaigns against malaria, RBM is horizontal in its approach, focusing on building sustainable community capacity. RBM is also unique in its ability to raise the level of political commitment and advocacy at the country level. It draws inspiration and support from the joint efforts of national governments acting as stewards, plus a range of development partners, including the international and local private-sector, NGOs and civil society.

The partnership facilitates scaling up by supporting country strategic plans of action focusing on increased coverage for the prevention and treatment of malaria. RBM is helping health systems to deliver cost-effective interventions including better health care – focusing on pregnant women and advocating for the strenthening of IMCI strategies for the prevention and treatment of childhood illnesses at community level – insecticide-treated nets, and improved environmental management. At the same time RBM is harnessing the support of public- and private-sector researchers in developing new malaria drugs and vaccines. RBM is based on the principle that people at risk of malaria should be at the centre of a movement to reduce the impact of the disease in their communities through more effective action and widespread use of preventive and treatment interventions.

Forging country partnerships and exploring effective ways to work with communities at risk to improve the distribution of goods and delivery of services is vital, as is an increased emphasis on home treatment. Expanding access to affordable drugs, insecticides, nets and supplies at the household level is possible

Mid-term targets of the International Partnership Against AIDS in Africa (to the year 2005)

Increased access to HIV prevention interventions.
Provision of appropriate support and care to persons infected and affected with HIV/AIDS .
Expanded and decentralized responses to the epidemic.
Increased financial, technical and political resource investments.

Scaling up priority areas for HIV/AIDS control

Baseline (2000) and scaling up HIV interventions (2005) assumptions for prevention programmes in sub-Saharan Africa.

Intervention	Potential target group (age, in years)	Measure of coverage	Baseline (2000)	Target (2005)
Youth-focused interventions	Male and female youth enrolled in school.	Proportion aged 6 – 11 receiving HIV education	5 – 20%	50%
	aged 6 – 11	Proportion aged 12 – 16 receiving HIV education	20 – 50%	80%
In-school youth	aged 12 – 16			
Youth-focused interventions Out-of-school youth	Males and females aged 12 – 16	Proportion aged 12 – 16 receiving HIV education	5 – 20%	50%
Sex-worker interventions	4% urban women aged 15–49. Average 2 sex acts per week	Proportion total reached	20 – 50%	60%
		Proportion using condoms often	10 – 30%	70%
Strengthening public- sector condom distribution	All sex acts with non-regular partners	Proportion using condoms often in non-regular partnerships	10 – 40%	70%
	20% sex acts in regular partners	Proportion using condoms in regular partnerships	2%	2%
Condom social marketing	All sex acts with non-regular partners	Proportion using condoms often in non-regular partnerships	10 – 40%	70%
	20% sex acts in regular partners	Proportion using condoms in regular partnerships	2%	2%
Strengthening STI services	Men and women with curable STIs and access to health services	Among those with access to health services, proportion of curable STIs treated by health service	5 – 20%	30 – 40%
Voluntary counselling and testing (VCT)	Current sexually active population	Proportion receiving VCT urban	1%	0 – 1%
		Proportion receiving VCT rural	5%	5% (including mother to child transmission testing)
Strengthening blood-transfusion services	Blood for transfusion	Proportion units of blood for transfusions tested		
		Urban	70 – 90%	100%
		Rural	70 – 90%	100%
Mother-to-child transmission	Pregnant women aged 15 – 49	Proportion pregnant women tested for HIV, All pregnant women	0 – 0.5%	50%
IEC / mass media	National campaigns for entire country	Number campaigns per year	2	6

through additional development assistance and public debt-relief, as well as new resources from the private-sector. In order to improve global access to essential new interventions such as combination drug therapy and permanently-treated nets, global subsidies will have to be provided by a global commodity fund similar to the one developed for the TB procurement of antituberculosis drugs.

International Partnership against AIDS in Africa

The International Partnership against AIDS in Africa (IPAA) is a coalition bringing together African governments, the United Nations, donors, the private-sector, NGOs and civil society, working together to achieve institutional change. It is supported by UNAIDS and its purpose is to curtail the spread of HIV and reduce its impact through sustained national responses.

An IPAA innovation is the development of national partnership mechanisms to overcome the fragmentation that has characterized the response to date. Investing in such mechanisms is intensive in terms of time and resources, but it is critical to achieving the institutional change needed. IPAA's goal is to ensure that national strategic plans are reviewed, operationalized and financed in at least 20 countries by 2002.

No other region has developed such a comprehensive framework for action, although there are a number of promising initiatives that, like IPAA, are supported by a partnership of governments, the UN, bilateral agencies and NGOs. Efforts in Latin America, the Caribbean,

South Asia, South-East Asia, and eastern Europe that support national responses, and ensure that international partners act more effectively, have played a significant role and have considerable scope for expansion.

Global Fund to Fight AIDS, TB and Malaria

Ideas and activities for the creation of a Global Fund to Fight AIDS, TB and Malaria have recently been converging. Public attention was drawn by the call of the United Nations Secretary-General for the establishment of a fund that would contribute to the US$ 7-10 billion increase in spending needed to combat HIV/AIDS, TB and malaria, and to strengthen health services. The purpose of the Fund would be to mobilize, manage and disburse additional resources that will enable countries to progress more rapidly to achieving positive health outcomes.

The Fund would be characterized by highly-visible operating systems, transparent processes, the relentless pursuit of results, speedy disbursement, and support for a range of service providers under common (usually government) stewardship. Investors would be able to predict the likely impact of their investments. The continued availability of financing for any recipient country or community would be linked to performance of relevant social systems (particularly health systems) and the results achieved among vulnerable communities. Outcomes would be monitored independently. The Fund would focus initially on better outcomes in relation to HIV, malaria and tuberculosis. Countries would decide on detailed programming; the Fund's board would review strategy, overall cost, indicators of commitment and feasibility within national development processes. Financing would be made available in ways that take national mechanisms for coordination and strategic planning into account. Care should be taken to reduce burdens on national finance or health-management systems. National and local ownership is a key to successful imple-

Estimates on cost for care for people with HIV/AIDS in sub-Saharan Africa.

All cost estimates are given in million US$; 2000 values.

Costs for care (without antiretroviral therapy)	Low	High
Palliative care	30	43
Treatment of opportunistic infections	151	216
HIV testing in treatment sites	4	5
Prophylaxis of opportunistic infections	15	22
Service delivery cost (in- and outpatient visits)	748	1,068
Care for orphans	175	250
Total care (US$ million)	**1 123**	**1 604**

Source: UNAIDS 2000

mentation of interventions, geared to different national contexts.

Massive Effort Campaign

A new global advocacy network is catalyzing the emergence of a social movement against diseases of poverty, particularly HIV/AIDS, TB and malaria. The Massive Effort Campaign (MEC) is a network of individuals, NGOs, corporations and civic organizations which promote best practices in advocacy and communications to stimulate social and political change. MEC works in support of the priorities of the United Nations, WHO and national public health institutions, while operating independently to use the most effective advocacy and communications strategies to help achieve these goals.

The Massive Effort Campaign will work by supporting networks of existing organizations with strategic information, best practices, prototype messages, useful opportunities for collaboration and coordination, funds for priority social mobilization projects and evaluation of efforts to affect the knowledge, skills and behaviour of target audiences. The Campaign is empowering a much larger global movement of people who cannot tolerate the injustice of millions of people dying every year for lack of effective medicines and supplies that cost US$ 10 or less.

Global Business Council on HIV/AIDS

As the HIV/AIDS epidemic continues to spread, its direct economic impact is becoming more and more evident worldwide. Apart from the human cost, HIV/AIDS is increasingly affecting the people – consumers as well as workers – on which businesses depend. The Global Business Council is an international partnership between the public and private-sector whose underlying objective is to minimize the worldwide human and economic cost of HIV/AIDS. Created in 1997, the

Council is supported by Nelson Mandela and some of the world's best-known companies and emerged from efforts by UNAIDS to encourage direct corporate involvement in the fight against HIV/AIDS.

As an independent body working closely with UNAIDS, the Council sets out to develop programmes, share information and research that will help halt the spread of the epidemic and develop a support network for those already living with HIV/AIDS.

The Special Programme for Research and Training in Tropical Diseases (TDR)

TDR is cosponsored by WHO, the UN Development Programme (UNDP) and the World Bank, as well as collaborators in academia, industry, public and private institutions and donors from both developing and developed countries. In scrupulously giving precedence to science over politics, TDR provides a neutral platform where scientists, disease control experts, decision-makers and other partners from all over the world can work together.

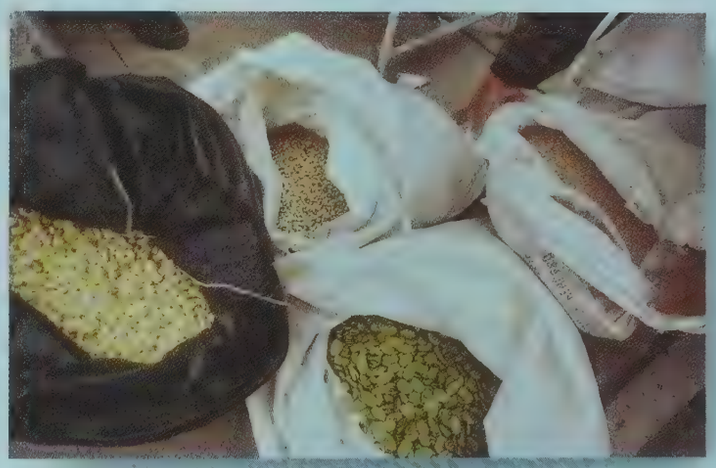
TDR has increased its emphasis on public health solutions, including tools and products, for poor and marginalized populations to counteract the growing inequity in access to health care services and products. It recognizes the key role that collaboration and partnership between public and private-sectors at all levels should play in closing the global gaps – in research and product development, as well as between those who are affluent and poor marginalized populations suffering from neglected infectious diseases.

As increased funding becomes available, it will be important to secure resources for research to develop new tools and to better understand the reasons for the persistence of infectious diseases as well as the determinants for their optimal control. TDR has a sound reputation in this area and could be used as a model for other similar partnerships.

As increased funding becomes available, it will be important to secure resources for research to develop new tools and to better understand the reasons for the persistence of infectious diseases as well as the determinants for their optimal control.

Global public goods

These are defined as "goods whose benefits reach across borders, generations and population groups. All public goods, whether local, national or global, tend to suffer from under-provision. The reason is precisely that they are public. For individual actors, it is often the best and most rational strategy to let others provide the good – and then to enjoy it – free of charge. At the international level, this collective action problem is compounded by the gap between externalities that are becoming more and more international in reach and the fact that the main policy-making unit remains the nation state".



It is clear that cost-effective interventions work only when they are accessible to, and affordable for, those who need them. This applies to diagnostics, to commodities such as insecticide-treated nets and to treatments such as pharmaceutical drugs. Key strategic elements for addressing barriers to the affordability of existing health products include clarification of the role of intellectual property protection, wider and more effective use of voluntary licensing, and increased support for basic and applied research.

Public-private partnerships can develop mutually beneficial mechanisms to bring down the costs of existing medicines, vaccines and health products that are essential for improving the health of people living in poverty. Although public-private-sector partnerships are a relatively recent phenomenon, the incentive behind them is clear and simple. Socially-responsible businesses operate on the principle of enlightened self-interest. They want to keep productivity – and profits – high; therefore, businesses that operate in disease-prone areas have a vested interest in keeping their employees healthy. It makes sense to support the public health sector in extending public goods to all. In instances where the health sector is ineffective, the private-sector may itself assume a direct, if limited, responsibility.

Six of the world's leading pharmaceutical companies – Abbott Laboratories, Boehringer Ingelheim, Bristol-Myers Squibb, Glaxo-

SmithKline, Hoffmann-La Roche and Merck & Co., Inc. – agreed to work with the UN system to improve access to better health care and HIV-related medicines for people in developing countries as part of a global initiative, including prevention, education and research, to combat AIDS. For example, Pfizer announced that it will expand its free distribution of the AIDS drug Diflucan to patients in 50 of the least developed countries.

Another example of making drugs affordable is the recent agreement between Novartis and the World Health Organization to provide a new drug – Coartem – for drug-resistant malaria in developing countries at cost price, reducing it from US$ 40 to less than US$ 2.50 for the full course of treatment for adults, and considerably less for children. Additionally, Aventis and WHO have entered into a partnership over a period of 5 years. Through this collaboration, some of the barriers that make existing medicines and tools unaffordable to developing countries can be tackled. The partnership aims to explore the feasibility of drug donations and to provide more effective support for disease management as well as research and development.

WHAT WILL IT COST?

Scaling up the response to infectious diseases calls for the mobilization of sufficient financial resources to support necessary interventions, including training, tools, medicines, research, and an adequate supply of health professionals. The Commission on Macroeconomics and Health (CMH) recently published a report, *Macroeconomics and Health: Investing in Health for Economic Development*, which estimated that, by 2010 around 8 million lives per year could be saved – mainly in the low-income countries – through the essential interventions against infectious diseases including, but not limited to – AIDS, TB and malaria – and nutritional deficiencies.

The CMH report sets out the level of resources necessary to have effective interventions to improve the health and

extend the life spans of poor people, which in turn would stimulate economic development and reduce poverty.

To address health challenges in low-income countries, minimum financing needs to be US$ 30- US$ 40 per person per year to cover essential interventions, including those needed to fight the HIV/AIDS epidemic. Current actual spending on health in the least-developed countries is around US$ 13 per person per year.

Donor finance will be needed to close the financing gap, in conjunction with best efforts by the recipient countries themselves. The CMH estimates that a worldwide scaling up of health investments for the low-income countries to provide the essential interventions of US$ 30 to US$ 40 per person will require approximately US$ 27 billion per year in donor grants by 2007, compared with around US$ 6 billion per year that is currently provided. This funding should be additional to other donor financing, since increased aid is also needed in other related areas such as education, water and sanitation.

Scaling up of domestic budgetary resources for health in the low-income countries is also necessary. The CMH report sets out that, for low-income countries, this entails an additional budgetary outlay of US$ 23 billion by 2007.

For all low-income countries, approximately US$ 66 billion per year above current spending levels would be needed by the year 2015, which would result in a total economic gain of at least US$ 360 billion per year.

The three main diseases of poverty, HIV/AIDS, tuberculosis and malaria, call for an additional scaling up of research, and prevention and treatment interventions. The CMH report calls for two new funding mechanisms: the Global Fund to Fight AIDS, TB and Malaria to fund to make annual outlays of US$ 8 billion by 2007, and; the Global Health Research Fund to make annual outlays of US$ 1.5 billion by 2007.

Earlier estimates for the three diseases have shown that for these diseases alone, there is a need for investments of:

The cost of going global against HIV/AIDS, tuberculosis and malaria

Disease/condition	Annual amount needed (US$)	Annual funds available (2001) (US$)
HIV/AIDS	9.2 billion	1.8 billion
Tuberculosis*	1-1.5 billion	600-800 million
Malaria**	1 billion	600 million

* TB in the 22 high-burden countries only.
** Malaria in sub-Saharan Africa only.

Overcoming obstacles to global public health by enhancing affordability and incentives

Current obstacle	Response (corrective measures or new initiative)
Lack of effective demand (including the ability to pay)	• A global fund for health • Global TB Drug Facility • Tax incentives for product donations • A framework for tiered pricing • More widespread and effective voluntary licensing
Weak incentives for R&D investment	• A global fund for health (advance- purchase commitment) • Clarity on the terms of intellectual property protection • Targeted public support for R&D • Securing of potential markets and co-investments in marketing new products • Tax incentives for R&D • Public-private partnerships for R&D
Drugs: weak incentives for extra investment in basic research	• Support for basic and applied research • TDR
Drugs -- blockages in progress at the clinical trials stage	• Establishing a clinical trials platform
Drug clearance: regulatory delays	• Harmonizing the regulation of new products

US$ 9.2 billion a year for HIV/AIDS, with half of these resources needed in sub-Saharan Africa; US$ 1 to 1.5 billion a year for tuberculosis in the 22 high-burden countries alone, and; US$ 1 billion for malaria in sub-Saharan Africa alone.

GOING TO SCALE

We may be witnessing a truly unique moment – a moment of heightened awareness and action. Something similar happened two decades ago around environmental awareness, which brought not only a spate of new initiatives, but concrete action as well. Today health stands high on the world's political agenda. The time has come to scale up the global response against diseases of poverty, starting with HIV/AIDS, tuberculosis and malaria.

The international community has agreed upon a series of development targets to be met. Three of these are to halve deaths from malaria and tuberculosis by 2010 and to reduce HIV prevalence by 25% in young people by 2010. Achieving these ambitious goals requires a comprehensive global strategy that builds on existing initiatives.

WHO is an active and ardent proponent of the global scaling-up movement. It proposes a framework for action that builds on current activities, gearing up for at least 10 years of intense action aimed at moving the world – especially its most needy countries and people – onto a "superhighway" to health. The framework, which will focus initially on HIV/AIDS, malaria and tuberculosis, has six components:

• **Fresh, additional resources:** Ideally, US$ 10 billion a year to build national health systems, carry out interventions and upgrade global public goods.

• **Key global functions:** Research to develop essential new drugs and vaccines; partnerships to lower drug prices and improve access for the poor; efficient purchase and equitable distribution of vital commodities, including quality, low-cost medicines against the diseases of poverty .

• **Resource-transfer mechanisms:** The ability to move funds rapidly to where they are needed, while ensuring transparency, decision-making at country level and a results-related feedback link.

• **Enhanced health systems:** Delivery of essential goods and services via private, voluntary and public providers with an emphasis on government stewardship; investments in infrastructure and better logistics to distribute medicines and other vital commodities and services.

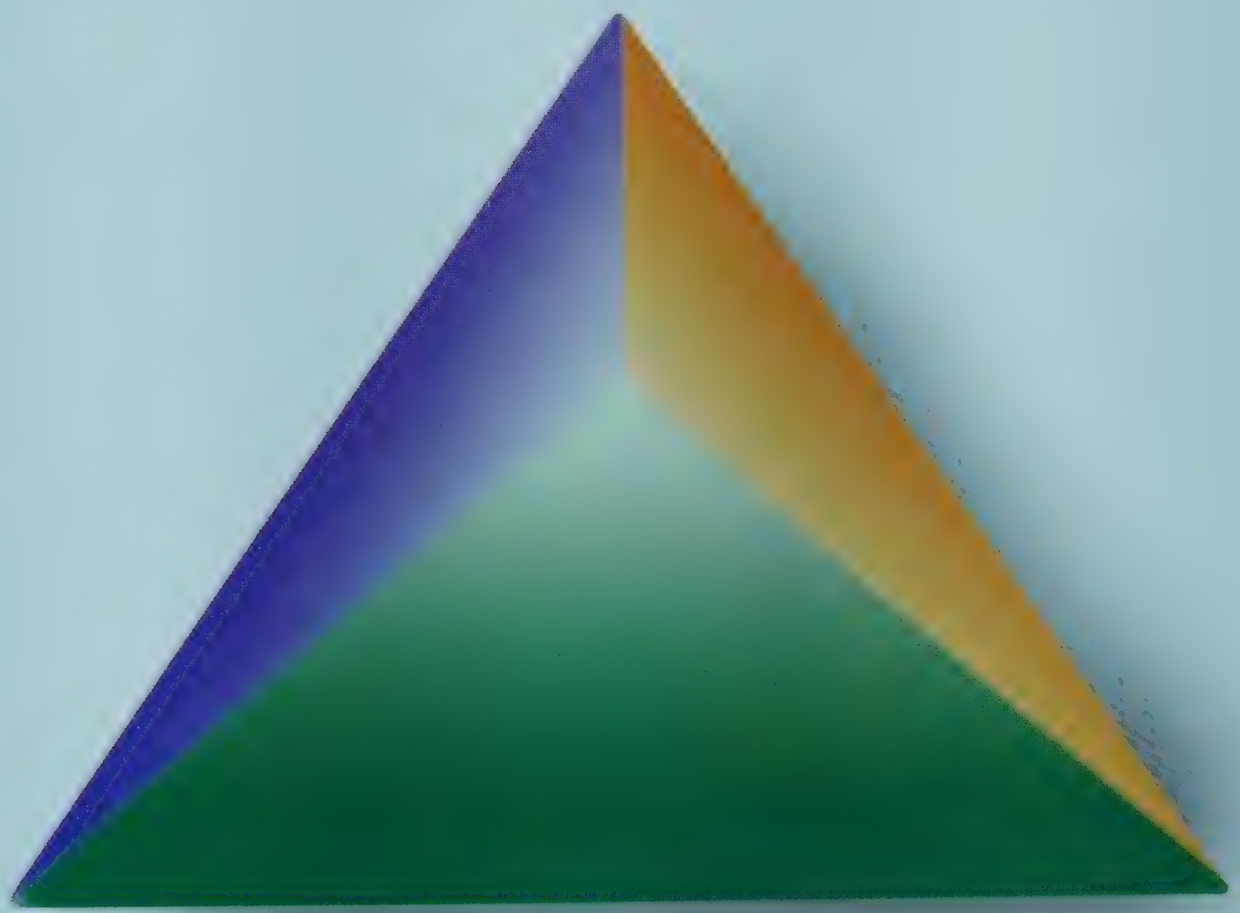
• **Impact monitoring:** Independent and reliable monitoring, reported rapidly and openly, to sustain long-term involvement through an ever-present feedback loop.

• **Social mobilization:** Advocacy and communications programmes that work through governments, NGOs and the media to catalyse social mobilization "trickling up" from local to global levels.

The specific elements of scaling up efforts to fight diseases of poverty will vary from country to country according to factors such as prevalence, differences in modes of transmission, the relative maturity of the epidemic, the extent of the dispersal – or concentration – of the epidemic through different sectors of the population and the extent to which the existing health system is able to respond.

All global efforts must eventually be achieved within a framework of strong, cohesive national planning and strengthened by community action. Moreover, scaling up prevention and control activities cannot be addressed by the health sector alone: it must involve other social and economic sectors across all levels of society. Nor will it succeed if only tackled by the public sector alone. Only with massive involvement of civil society and the private-sector can this challenge be met.

THE WAY FORWARD



"A road map to how we can achieve rapid, measurable results in the fight against three of the diseases that take the heaviest toll on the poor"

Poor people will only be able to emerge from poverty if they enjoy better health. And although better health is obviously not the only condition for progress, it is a central one. Health should be at the heart of our struggle for sustainable development.

Last year, the Commission on Macroeconomics and Health established the scientific foundation for these arguments. It showed clearly how investments in health in developing countries give manifold economic returns – both for the individual and for society.

The Commission recommended that the world's low- and middle-income nations, in partnership with the industrialized ones, should drastically scale up access to essential health services for their populations. The focus should be on specific measures to control the deadliest and most debilitating diseases and to strengthen the health systems so that those who get ill are cared for – no matter how poor they are.

Such a commitment would mean a substantial new investment in health. But it is an investment with impressive returns: millions of lives saved and economic benefits of several hundred billion dollars each year.

We must act now. The alternative is grim. If we fail to take action, within ten years HIV/AIDS will have engulfed large parts of Asia and eastern Europe - dwarfing the scale of the current epidemic in Africa. Drug-resistant TB may have become as widespread as ordinary TB, making treatment of this disease difficult and expensive. Other medicines may also have lost their potency due to growing drug-resistant strains. Malaria may have spread further into areas now free of the disease.

The United Nations Millennium Declaration has laid out several clear health targets: among them, reducing malaria and tuberculosis by half and reducing new HIV infections by a quarter within ten years. The Commission on Macroeconomics and Health has told us what we need to do to achieve these targets and what it will cost. This Infectious Diseases Report is an attempt at showing how we can get there. It is a road map to how we can achieve rapid, measurable results in the fight against HIV/AIDS, tuberculosis and malaria - three of the diseases that take the heaviest toll on the poor.

DR GRO-HARLEM BRUNDTLAND
Director-General
World Health Organization

"UNICEF is committed to working in partnership"

The global impact of infectious diseases is attracting valuable attention and resources. In scaling up the global response, and as part of our larger commitment to the Millenium Declaration and International Development Targets to reduce child mortality, UNICEF is particularly committed to health concerns that affect children.

In addition to the direct and indirect impact of AIDS, TB and malaria on children, acute respiratory infections (ARI), diarrhoeal diseases and vaccine preventable diseases such as measles continue to affect children and account for as many deaths as AIDS, TB and malaria combined. We have in hand effective, low-cost tools such as vaccines, antibiotics, oral rehydration solution, anti-malarials and treated bednets that can save millions of lives due to these illnesses, and we are committed to ensuring that they reach all the children who need them.

UNICEF is working closely with WHO and other international and national partners to ensure universal access to life-saving vaccines and drugs as well as access to services and information that support their effective use. Most childhood deaths occur in the home and this holds profound implications for how we scale up our response. As a result, social mobilization and community participation as well as targeted behaviour change communication are crucial components of our overall efforts to reduce child deaths. So is our work in education, water supply and other social development interventions that collectively create an environment in which better child health may flourish.

In all these efforts, UNICEF is committed to working in partnership. UNICEF is a key partner in the Global Alliance for Vaccines and Immunization (GAVI), the Polio Partnership, Roll Back Malaria and other alliances which are bringing fresh vision and crucial resources to the global struggle against infectious diseases.

CAROL BELLAMY
Executive Director
United Nations Children's Fund

"The poor are less able to defend themselves against the impact of AIDS"

2001 was a turning point in the world's response to HIV/AIDS. At the United Nations General Assembly Special Session on AIDS in June, a Declaration of Commitment was unanimously adopted that sets ambitious targets for preventing the spread of HIV, improving access to care, reducing vulnerability and combating stigma. These targets are an instrument of accountability in the world's response to AIDS.

This report notes that for AIDS, tuberculosis and malaria, there has been a recent upsurge in global commitment. But in reality, the commitment to AIDS comes from the sustained efforts of a global AIDS movement which began almost as soon as the disease came to light twenty years ago. As the full implications of the global spread and impact of HIV have become apparent, the movement has become broader and deeper – uniting scientists, activists, service providers, community leaders, religious leaders, cultural and sporting icons.

Now, political leaders at the highest level are fully engaged in this fight. Nearly every regional or global summit of note has AIDS on its agenda, the broadest dimensions of the AIDS epidemic have been debated in the UN Security Council, and countless Presidents and Prime Ministers have personally taken up the issue.

No region of the world is immune from HIV. It affects rich and poor alike, although the poor are less able to defend themselves against the impact of AIDS. This report draws attention to the ways in which AIDS, along with tuberculosis and malaria, deepens poverty. But it would be a mistake to position AIDS as a 'disease of poverty'. It is precisely the ability of HIV to cross all boundaries that has made it uniquely threatening to human development, and has made international solidarity in the fight against AIDS an absolute necessity.

As the world moves to a new level of heightened determination to combat HIV/AIDS, UNAIDS – including every one of our eight co-sponsors – will be working on many fronts:

- to support local responses and ensure that the message of success spreads from community to community;
- boosting civil society's participation in a broad AIDS response, and helping to harness the efforts of women, youth and other other social movements;
- helping the private sector to make good its responsibilities to workforces and to communities, and to better network its efforts;
- ensuring that governments have the means to collect the information and develop the strategies they need to maximise the effectiveness of their response; and
- assisting to boost resources and develop the channels that direct these resources most efficiently to the community level where they make the most difference.

A new paradigm guides our work in which prevention and care are complementary pillars of a comprehensive AIDS response. The old paradigm held that antiretroviral treatment as an element of AIDS care was too difficult and expensive for the developing world.

The new paradigm recognizes the ethical impossibility of denying to the majority of people living with HIV the life-saving treatment that has been available to the minority. It builds hope for communities on the basis of a joint commitment to care and to preventing the further spread of HIV, and it recognizes that people living with HIV and those directly affected, are the greatest resource in combating the epidemic.

PETER PIOT
Executive Director
Joint United Nations Programme on HIV/AIDS

UNAIDS

"We are ready to work closely with our partners to ensure that Poverty Reduction Strategies now taking form in many countries support these recommendations"

As we move into the new Millennium, the World Bank is greatly expanding its work with country governments, international partners such as WHO, UNICEF and UNAIDS, and many other local groups in order to confront major infectious disease killers. Communicable disease prevention and control are among the Bank's top priorities on account of the profound impact they can have on reducing poverty. Along with the United Nations, the Bank is committed to achieving the Millennium Development Goals for the year 2015. The Millennium Development Goals include reducing child and maternal mortality, reversing the epidemics of HIV/AIDS, malaria and tuberculosis, and boosting other development indicators that contribute to and are influenced by improved health.

The strategies and interventions included in this report are critical for scaling up the response and pursuing these goals. We are ready to work closely with our partners to ensure that Poverty Reduction Strategies now taking form in many countries support these recommendations. The poverty reduction framework enables these health problems to be seen as real challenges to development and be integrated into a larger agenda for change.

The Bank will continue to help governments design, finance and improve health systems – so critical to better disease prevention outcomes. The institutional, management and technical capacities of governments, providers and communities are weak at the moment. Mechanisms such as the Multi-country AIDS Program for Sub-Saharan African nations and the Global Fund to Fight AIDS, Tuberculosis and Malaria should help expedite access and use of new resources. The recent partnerships developed to fight HIV, TB, malaria and other health priorities increase our means to collaborate and to involve communities. We hope that these initiatives will further complement each other in helping ease the burden of infectious diseases on their beneficiaries, and thereby speed up success in overcoming the problem.

The coming years will be exciting and challenging as we move forward to address the pressing problems posed by infectious diseases.

JAMES D. WOLFENSOHN
President
The World Bank

"UNFPA recognizes the proven effectiveness of HIV prevention and has made it an institutional priority"

The HIV/AIDS pandemic is one of the major challenges facing the world today. Its ability to intricately weave its devastating effects across sectors and across borders threatens not just our health, but our very way of life. If the global impact of HIV/AIDS is to be reduced, HIV prevention must be central to the response. UNFPA recognizes the proven effectiveness of HIV prevention and has made it an institutional priority. Focusing efforts on prevention among young people, prevention in pregnant women and provision of comprehensive condom programming, the Fund is translating that commitment into action through provision of support to governments and civil society groups in programme countries.

Recognizing that reproductive health provides an important entry point for HIV prevention, UNFPA is working to provide professionals in health and other social sectors with the skills needed to counsel clients on HIV prevention, overcome local taboos, and effectively manage sexually transmitted infections to reduce vulnerability to HIV infection. We are working in various reproductive health settings to provide voluntary counselling and testing services, both to empower women to protect themselves from HIV infection and to promote male responsibility in protecting themselves, their partners and their children from infection.

For young people, who not only represent our future but also control the future of the pandemic, UNFPA is supporting governments and other partners to develop and provide culturally sensitive and youth-friendly adolescent sexual and reproductive health services, and to create behaviour change communication messages and skills-building opportunities. The aim is to equip young people with the information, knowledge and skills to deal with life challenges and make responsible and appropriate choices and decisions to protect their own reproductive health and lives and those of their partners. To maximize results, the Fund also advocates for the involvement of young people in all aspects of interventions – from planning, decision-making and implementation to monitoring and evaluation.

UNFPA also partners with governments, non-governmental organizations and private-sector companies to support countries in their efforts to defeat HIV/AIDS.

In the era of HIV/AIDS, experience shows that success does not come by working alone; it requires a concerted, coordinated, resourced, proactive, scaled-up, multisectoral and multi-partner response, with prevention at its core.

THORAYA AHMED OBAID
Executive Director
United Nations Population Fund

UNFPA

"UNESCO is committed to making health promotion and preventive education, particularly in regard to HIV/AIDS, a high priority"

Health is an essential condition for teaching and effective learning, and is also an outcome of quality education. Combating infectious diseases, therefore, must be a key element in efforts to achieve Education for All (EFA), and health must be high on the agenda of the education sector at all levels.

Infectious diseases directly affect the demand for education by decreasing the enrolment, participation and performance of school-age children and youth, especially among the poorest and most disadvantaged populations. Ill-health among children and youth results in the loss of millions of school-days annually. In some countries, the havoc wreaked by the HIV/AIDS pandemic is crippling the education system itself, endangering both the supply and quality of education.

By addressing the health needs of students and staff, Governments can maximize the return on their investment in education, both during and after the years of formal schooling. Comprehensive school health programmes such as those described in the new inter-agency initiative known as FRESH, are efficient and cost-effective means of coping with significant health problems such as infectious diseases. Such programmes include effective policy development, improved learning environments and the provision of essential life skills, education and basic health services.

UNESCO is committed to making health promotion and preventive education, particularly in regard to HIV/AIDS, a high priority in its strategies and action in follow-up to the Dakar World Education Forum. Strengthening school health as a vital means of improving the health and well-being of pupils has been designated a key area to improve basic education outcomes. Current activities being promoted include the integration of school health issues into National EFA Action Plans, which will influence national education reform up to 2015. In this regard, strong emphasis will be placed on major infectious diseases, notably HIV/AIDS and malaria. Timely and well-targeted preventive education programmes are particularly important so that those most at risk are spared the suffering, loss and missed opportunities that infectious diseases bring.

KOICHIRO MATSUURA
Director-General
United Nations Educational, Scientific and Cultural Organization

UNESCO

The resources and know-how exist. We have historical opportunity to combine and use them to ensure better health and greater economic growth in just a couple of decades. If we want equity and security in our lifetime and for future generations, we cannot afford to miss this opportunity.

Manmohan Singh
Rajya Sabha Leader
Parliament of India

Pharmaceutical Industry has made great strides to provide more affordable medicine to poor countries, but we need to make it the norm, not the exception.

DR SUPACHAI PANITCHPAKDI
Director-General Designate
World Trade Organization

We must begin to see development assistance more in terms of an investment in the future, in the protection of the global public well-being, including peace, healthy populations, a healthy environment and a more equitable economic system.

TAKATOSHI KATO
Adviser to the President
Bank of Tokyo-Mitsubishi

Even conservative forecasts suggest that future annual economic growth in sub-Saharan Africa will be one third lower than what it could be without AIDS.

K.Y. AMOAKO
Executive Secretary
Economic Commission for Africa

"Improved TB detection and HIV testing of all TB patients are a priority"

Peru launched a counter-offensive against TB to free the country from being one of the world's 22 highest burden countries. With a 100% DOTS coverage achieved, improved TB detection and HIV testing of all TB patients are a priority. In resource terms this has meant shifts in funding: 20% less funding for defense, 56% more for health and a 2002 TB control budget that amounts to US$ 23 million.

DR MANUAL QUIMPER HERRERA
Vice-Minister of Health
Peru

"We need to expand the number of partners and funding for TB control"

We need to expand the number of partners and funding for TB control on a state level in order to increase sustainability and expansion of the TB programme. Currently negotiations are underway with some oil companies in Nigeria to assist local TB programmes. Partnerships are good but they can be fragile and in order to work, roles and responsibilities need to be clear.

DR EDUGIE ABEBE
Director-General of Health
Nigeria

"Ensuring that malaria victims countrywide have prompt access to effective drugs"

The government of Kenya has spelled out the way forward with regard to malaria control, for the next ten years covering the period set by Roll Back Malaria to realize tangible differences in malaria control and prevention in Africa. The strategy addresses the malaria problem by ensuring that malaria-victims countrywide have prompt access to effective drugs, promoting accessibility and use of insecticide treated nets, the use of other mosquito control methods and intermittent treatment of pregnant women and setting up epidemic preparedness strategies and other support elements such as IEC campaigns, operational research and monitoring.

PROF SAM ONGERI
Minister of Public Health
Kenya

"The time for collective action is now"

If we are to be effective in the long term, we must learn from the experiences of those caught in the centre of this AIDS whirlwind pandemic. This includes working harder to equalize the balance of power between men and women, especially our women who comprise a large percentage of our poor. Gender equality is a critical component in the process of changing sexual behaviour. We know that only when a woman is free to choose how she lives her life will she possess the capacity to best protect herself from HIV/AIDS. We have also started to deal with the vital issue of mother-to-child transmission.

Critical to our success is collaboration with the international community. Support in the areas of funding, research, information sharing, access to affordable medicines and treatment is essential and requires timely and effective participation by all.

The government and the people of Belize declare full commitment to halt and reverse the increasing trend of this pandemic. We know this is a tremendous task but to fail on our part to act decisively will condemn countless numbers, many in the flower of their youth, to certain death. To fail would be to break the most sacred compact of all the preservation and advancement of humanity.

We have neither time nor resources to waste. The time for collective action is now.

SAID W MUSA
Prime Minister
Belize

"We can effectively control TB"

Improved prevention and control of TB will reduce the spread of this disease. We know what needs to be done and we know how to do it. If we effectively apply proven and cost-effective strategies for TB control, adapting and improving them to meet our challenges, we can effectively control TB.

We also need unity in action, public private partnerships, community, volunteers and health workers to work together. While we have made some progress in TB control we still have a long way to go in ensuring quality service delivery and improved treatment outcomes and I believe that through targeted plans we will be able to achieve our objectives.

MANTO TSHABALALA MSIMANG
Health Minister
South Africa

"The ILO's new programme on HIV/AIDS in the world of work is a beginning"

HIV/AIDS is not just a public health issue, it is a workplace issue, a development challenge and the source of widespread insecurity. ILO's commitment to be a partner in this challenge stems from its primary goal of providing men and women with decent and productive work in conditions of freedom, equity, security and human dignity.

We must react to the crisis unfolding in so many places where skilled and experienced workers are dying or, where children are forced to work and head households because all the adults either are too sick to work or have died.

The ILO's new programme on HIV/AIDS in the world of work is a beginning. Through it we will work with our tripartite constituents at national and regional levels to promote prevention in the workplace and mitigate the social and economic impact of the epidemic.

Concern for HIV/AIDS is reflected in other ILO activities. The ILO Programme on child labour will expand its efforts to address the needs of children orphaned by AIDS and forced into the world of work. The gender dimensions of HIV/AIDS will be addressed within the framework of the ILO's programme on gender and other activities to help reduce the vulnerability of women and girls to the disease.

JUAN SOMAVIA
Director-General
International Labour Organization

"Europe is fully committed to further step up its efforts"

The world cannot ignore the AIDS epidemic. In developing countries where 90% of HIV infections occur, AIDS is reversing hard-won gains in improving the quality of life. Last year in Africa, 10 times as many people died from HIV/AIDS as were killed in conflicts. In contrast, we in Europe are fortunate to be alive at this moment in history. Never before has our world enjoyed so much prosperity with so few external threats. Global society is calling on the international community for its recognition of the magnitude of the problem and its support in combating it. This is the hour of global solidarity. The West must increase its efforts to help more nations and people to break the vicious cycle of disease and poverty.

Europe is fully committed to further step up its efforts to face this epidemic and to increase support for the fight against the three major communicable diseases: HIV/AIDS, malaria and tuberculosis.

JOHN B. RICHARDSON
European Commission

"The public-private-partnership template works – it now needs to be scaled up"

Drugs that target infectious diseases in general are known to have a limited useful life due to the eventual emergence of resistance. Although for malaria this useful life can be very long the real need is to have sustainable R&D which generates new drugs before problems arise. MMV's plans are currently focused on further developing a balanced and sustainable portfolio of R&D projects with our many pharmaceutical and public-sector partners. Our current portfolio of development projects represents incremental advances on existing drugs or drug combinations. These can impact the disease before 2010. Our most innovative discovery projects are likely to impact beyond 2010 but have the major benefit of representing wholly new drugs that have the potential to provide broad efficacy against current and emerging strains of the malaria parasite.

What is really exciting to me is that public-private-partnership template works – it now needs to be scaled up.

DR CHRIS HENTSCHEL
Chief Executive Officer
Medicines for Malaria Venture

"A quantum leap forward in global health"

As a prime mover in TB drug development efforts worldwide and a committed partner in WHO's Stop TB Initiative, the Global Alliance for TB Drug Development joins the call for scaling up the response to infectious diseases. The TB Alliance is at the cutting edge of developing new, radically improved tools today, so that the world can wage a much more effective war against these diseases.

Now firmly on the path to a new affordable TB drug by 2010, the TB Alliance is in negotiation for several compounds in the lead optimization and pre-clinical stages from public, academic, biotech and pharmaceutical institutions. We are moving technology and designing innovative agreements to ensure that new drugs will be affordable in endemic countries. We believe that the dividends of such a new mode of doing 'good business' will translate into win-win results for both private and public players as well as a quantum leap forward in global health.

DR MARIA C. FREIRE
Chief Executive Officer
Global Alliance for TB Drug Development

"Scaling up the fight against AIDS means trimming down the time spent developing the tools needed to end the epidemic"

For the International AIDS Vaccine Initiative (IAVI), scaling up the fight against AIDS means trimming down the time spent developing the tools needed to end the epidemic. Education and treatment must be priorities. But the ultimate solution is the discovery and global distribution of preventive vaccines.

Despite the potential to save millions of lives, lack of focus and funding has slowed AIDS vaccine research and development. With one new HIV infection every six seconds, we must make up for lost time.

Traditionally, industry drives vaccine development, based on anticipated profits. In the case of AIDS, where impoverished countries constitute the largest market, returns would be small, and interest has lagged. The public sector must step forward and create incentives to assure that AIDS vaccines are made and then widely delivered.

Over the next five years, IAVI will invest US$ 500 million in public-private partnerships designed to speed success by moving a dozen novel vaccine candidates into human testing in parallel. Complementing the drive for rapid scientific advances, IAVI seeks to guarantee that adequate financing, manufacturing and other infrastructure will be in place to rapidly provide vaccines to all who need them.

DR SETH BERKLEY
President
International AIDS Vaccine Initiative

"We must engage and enrage society to prevent further suffering from AIDS, TB and malaria"

The global health disaster is of staggering proportions. Three diseases – HIV/AIDS, malaria and tuberculosis – kill six million people world-wide each year and continue to plunge millions of families into lives of destitution. But even the most dispassionate observers can now agree: Investing in the minimal costs to control these diseases now outweighs the consequences of losing healthy consumers, productive markets and stable societies. A healthy world is in everyone's interest.

A dynamic, innovative network is emerging to accelerate efforts against these diseases. The Massive Effort Campaign is a new and impatient social movement using state-of-the-art communications, marketing and advocacy strategies to promote the control of diseases that keep people in poverty. It is intent on dramatically reducing deaths from AIDS, TB and malaria by the year 2010.

Immediate progress against these diseases can be made. It can be achieved with the involvement of new activists and champions who support campaigns to increase healthy behaviour. It will succeed if we can continue to "engage and enrage" society to provide simple medicines and health products – taken for granted in wealthier communities – to people in poorer countries who are vulnerable to disease.

THOMAS W. KÄRCHER-VITAL
Board of Directors
Massive Effort Campaign

"The challenge is how fast this can happen and to the vast majority of the world's poor, women and children"

Eradication of poverty remains the overarching goal of Bangladesh Rural Advancement Committee (BRAC). To us, poverty is not only economic impoverishment but also a manifestation of wider deprivations. For the past thirty years BRAC has been addressing these. Health is one such. Innovation and scaling up of successful programmes are two of BRAC's distinguishing features. The knowledge about oral rehydration therapy, for example, reached every household in the country and the recent drop in infant and childhood mortality is largely attributed to this. The DOTS programme involving the village health worker reaches thousands of Bangladeshi villages, in active partnership with government and donors. HIV/AIDS remains a looming threat to Bangladesh's future, and the BRAC initiative to impart HIV/AIDS knowledge to rural couples and adolescents is gaining momentum with the inclusion of new elements like sexuality, gender and violence against women. Micro-finance now reaches 4.5 million families; 1.2 million children, two-thirds of them girls. attend BRAC-run primary schools. 'Small is beautiful' but, to us, large-scale is an imperative. We believe that change is possible; in fact it is inevitable. The challenge is how fast this can happen and to the vast majority of the world's poor, women and children.

F. H. ABED
Founder and Chairperson
Bangladesh Rural Advancement Committee

"We will continue supporting Roll Back Malaria with concrete commitments in Nigeria and in other countries where we have operations"

Improving health and strengthening local health services have always been part of our commitment to promoting the wellbeing of the communities with which we interact when performing our business operations.

We do this by assisting local authorities in building, restructuring and maintaining health facilities, supplying medicines and hospital equipment, training medical and non medical personnel, and by carrying out vaccination, health awareness campaigns and prevention and control activities for a range of infectious diseases such as TB, hepatitis and especially malaria.

We also collaborate with international agencies and NGO's in promoting programs and initiatives and our involvement in the Roll Back Malaria Initiative since its launch in 1998 testifies to our awareness of the importance of tackling this disease.

Moreover we are contributing to the Global Fund for Fighting AIDS, TB and malaria and, by participating in the Global Health Initiative promoted by the World Economic Forum, are helping to raise greater public awareness and support on these critical issues.

As we see investment in the communities we work in as key to a better future, we will continue supporting Roll Back Malaria with concrete commitments in Nigeria and in other countries where we have operations.

GIAN MARIA GROS PIETRO
Chairman
Eni

"Medvantis feels the responsibility to do whatever is needed to fight AIDS, TB and malaria and will encourage others to do the same"

Every journey starts with a first step. AIDS, TB and malaria are a growing threat for the lives of people and the social and economic development of their countries in many parts of the world. They hit hardest where they can be least afforded, striking down especially people in poor communities.

To successfully tackle these issues, the partnership that supports the health care system in these countries urgently needs rebuilding. But there is a shortage of local resources, so we in the rich world have to step in and help. The task is not to reproduce the health services we have available to us, but rather to produce a system that is appropriate to the needs of people where they live. Not to build a specialist hospital in a small village, but to help equip networks of health service providers with enough training, information and knowledge to meet the needs of the local population.

That is why in 2001 Medvantis started to support several health initiatives in different parts of the world, such as an information and prevention project on AIDS, TB, malaria and diabetes in Kenya. Together with other companies and organizations we helped found a new NGO to put the knowledge and the skills of private and public partners together to make a difference. The Massive Effort Campaign focusses on advocacy and health prevention initiatives and supports the UN, WHO and G8 in their fight against the diseases of poverty.

Medvantis – as a health management company – feels the responsibility to do whatever is needed to fight AIDS, TB and malaria and will encourage others to do the same.

THOMAS SCHÖNEMANN
Managing Director
Medvantis

"We will continue to work in partnership with all relevant stakeholders to pursue an effective global response to infectious diseases"

Glaxo-SmithKline is committed to improving the health of the developing world in three key ways. We are the only company involved in R&D into both prevention and treatment of HIV/AIDS, TB and malaria. Our HIV and malaria candidate vaccines entered clinical trials in 2001. We are involved in the Medicines for Malaria Venture (MMV), the International AIDS Vaccine Initiative (IAVI) and the Global Alliance for TB Drug Development (GATB). We offer sustainable preferential pricing arrangements on vaccines, antiretrovirals and anti-malarials to the poorest countries of the world. And through our Global Community Partnership programmes we play a major part in community activities that promote health. Established in 1992, Positive Action is our international programme of HIV education, care and community support. Additionally, GSK is a founding partner in the Global Alliance to Eliminate Lymphatic Filariasis which includes what will become the world's largest drug donation programme.

We will continue to work in partnership with all relevant stakeholders to pursue an effective global response to infectious diseases.

DR JP GARNIER
Chief Executive Officer
Glaxo-SmithKline

"We will give sustained support to public/private partnerships in this critical field"

ExxonMobil teams are working with host governments and national Roll Back Malaria campaigns in Angola, Cameroon, Chad, Equatorial Guinea and Nigeria to identify where the company can make the greatest difference to malaria prevention and control. Country programs are primarily focussed on these key activities:

- Distribution of bed nets impregnated with insecticides to villagers in the areas of our operations;
- Training of nurses and village health workers on malaria treatment and prevention;
- Printing and distribution of posters and health education materials to help educate the local population on malaria prevention.

At the village level in Nigeria, ExxonMobil is also supporting the New Nigeria Foundation as it sets up health clinics in nine Delta States, including four clinics in the two states where ExxonMobil affiliates operate.

This initiative reflects ExxonMobil's commitment to public health in our communities, and to working with local public partners to strengthen health care capacity. Health is a cornerstone of opportunity. We will give sustained support to public/private partnerships in this critical field.

LEE R RAYMOND
Chairman and Executive Officer
ExxonMobil

"Our commitment does not just involve making a financial contribution but also entails playing an active part"

If the health crisis currently facing the world is to be tackled successfully, there must be a completely new and carefully targeted alliance between government, business and society as a whole. That is why Winterthur Insurance, a Credit Suisse Group company, has taken the lead in supporting Kofi Annan's initiative for a Global Health Fund for Fighting HIV/AIDS, TB and malaria.

We hope that we will act as a catalyst, encouraging other companies to take a new look at the problems facing the world and to become involved in finding solutions to them. Neither Winterthur Insurance nor any other global company in the business community can afford to stand by and watch, or allow itself to hope that the efforts of others will provide a solution to this problem.

This is not simply a question of charity or of a large company giving money to those who are less well-off. It is also a decision based on an economic analysis of the problems that exist. From a health insurance perspective, we firmly believe that higher quality health care not only benefits the customer, but also reduces health costs in the long run. There is now strong evidence to suggest that this principle does not apply solely to health insurance, but that investments in health also benefit the community, as well as a country's economy and ultimately also the global economy, as has been shown by the WHO Commission's report on macroeconomics and health.

We are committed to supporting the fight against diseases resulting from poverty. Our commitment does not just involve making a financial contribution but also entails playing an active part e.g. in supporting the 'Massive Effort Campaign' which aims to apply the skills and expertise of the private and public sectors in a new and truly unified global attempt to fight HIV/AIDS, TB and malaria.

THOMAS WELLAUER
Chief Executive Officer
Crédit Suisse Financial Services

***"Tackling complex global health crises will require a massive effort as outlined in* Scaling Up the Response to Infectious Disease: A Way Out of Poverty"**

With a long-standing commitment to global health, Merck continues to work in partnership with multinational organizations and other stakeholders to address the impact of HIV/AIDS and other diseases. Merck is encouraged by the efforts of the World Health Organization (WHO), the World Bank, UNESCO, UNFPA, UNICEF, and UNAIDS to "scale up" the global response to infectious disease. We share in their commitment to support public health programs and advocate good health as an essential foundation of economic development.

We welcomed the Commission on Macroeconomics and Health's (CMH) report and its findings supporting greater investment in health as a path to development. We stand ready to join with WHO and other stakeholders in the global alliance against poverty and disease. A key theme of the CMH report is partnership - and partnerships remain a crucial strategy to the improvement of health around the world. These partnerships lead to a coordination of efforts between the public and private sectors, draw on the complementary expertise of all stakeholders, and help put the systems and infrastructures in place to ensure long-term access to care and treatment. Tackling complex global health crises will require a massive effort as outlined in *Scaling Up the Response to Infectious Disease: A Way Out of Poverty*. This document represents an important step toward translating the findings of the CMH report into concrete actions that will help to overcome the global health challenges still faced by billions of people around the world every day.

RAYMOND V. GILMARTIN
Chairman, President and Chief Executive Officer
Merck & Co., Inc.

"We will leverage our local infrastructure, marketing expertise and be an advocate for workplace policies"

The unprecedented health crisis the world faces today threatens human welfare, development and social stability. While leadership from governments and the international community is crucial, the effort cannot and must not be theirs alone. Business has a role to play.

The Coca-Cola Africa Foundation has heeded the call to help safeguard the future of Africa in the fight against HIV/AIDS and Polio. We will leverage our local infrastructure, marketing expertise and be an advocate for workplace policies.

Under the "Kick-out Polio in Africa" programme, we are leveraging our local infrastructure and marketing expertise for National Polio Initiatives. To date, we have assisted in the immunization of over 130 million children.

Every business has a role to play. We must collectively continue to contribute, in partnership, our time, expertise and resources to help maintain sustainable communities.

ALEXANDER B. CUMMINGS
Chairman, Board of Trustees
The Coca-Cola Africa Foundation

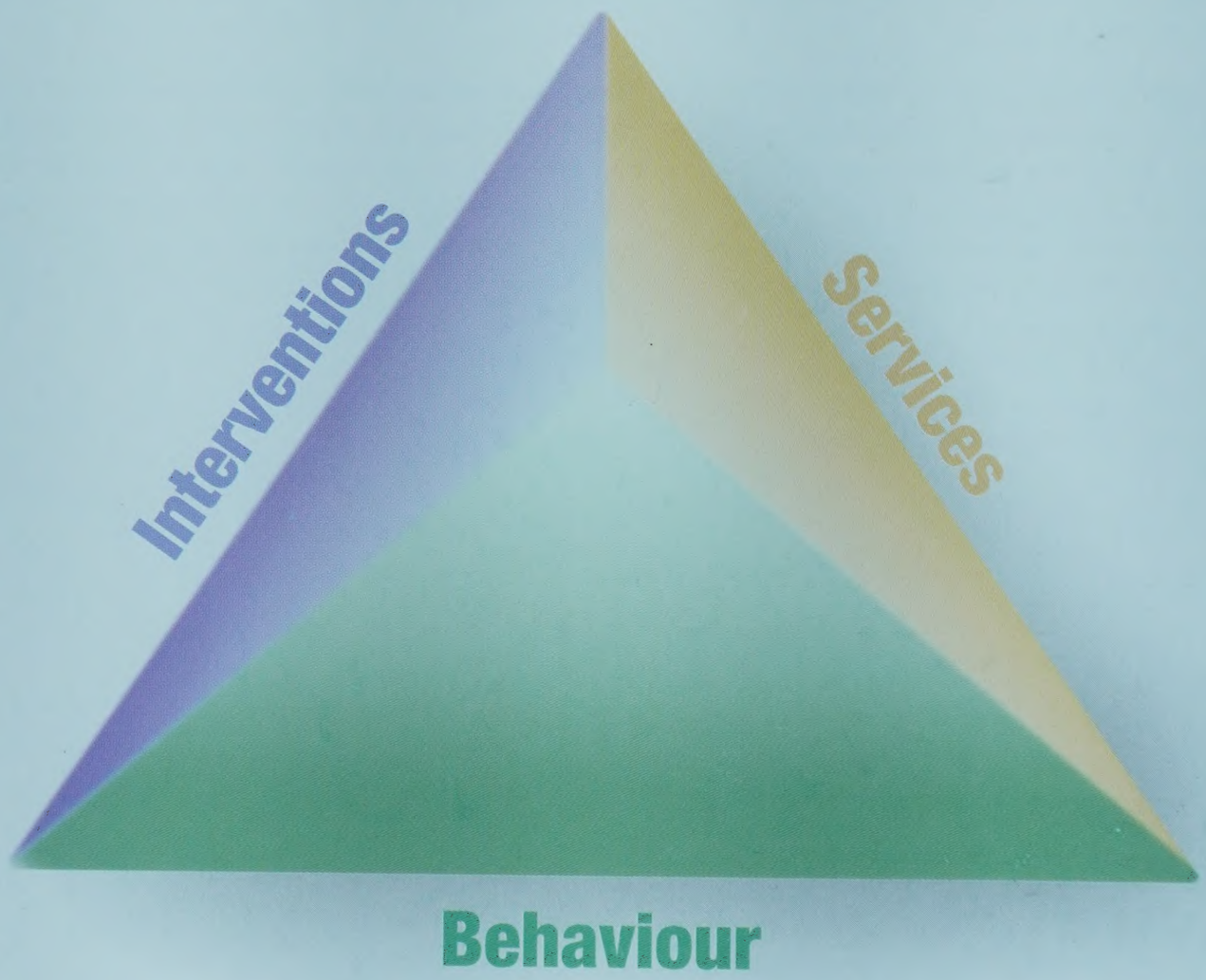
"De Beers is actively engaging stakeholders such as NGO's, organised labour, regional and local governments, and similar businesses in order to pool our thinking and share best practices"

Studies carried out during 2001 across our operations indicate that approximately (15%) of De Beers Group southern African workforce (including Debswana and Namdeb) is infected with HIV. De Beers is aggressively fighting the disease on many fronts, with the objective of reducing the infection rates and providing care and support for those already infected. The initiatives recognise the need to empower people through education and understanding of the disease and its consequences in order to effect a behavioural change.

A wellness programme has been established to keep individuals in good health whether HIV positive or not. The programme provides, amongst other things, the ongoing training of peer educators and councillors, the provision of voluntary counselling and testing at all of our operations either through the on-site medical centres or local clinics. De Beers has employed social workers in a number of communities to educate sex workers in safer sex practices. De Beers is actively engaging stakeholders such as NGO's, organised labour, regional and local governments, and similar businesses in order to pool our thinking and share best practices.

N.F. OPPENHEIMER
Chairman
De Beers

SCALING UP THE RESPONSE TO INFECTIOUS DISEASES



ABBREVIATIONS

AIDS: Acquired Immunodeficiency Syndrome
AMREF: African Medical Research Foundation
ARI: Acute Respiratory Infections
ARV: Antiretrovirals
BRAC: Bangladesh Rural Advancement Committee
DFID: Department for International Development (UK)
DOTS: Directly Observed Treatment Short-Course
EPI: Expanded Programme on Immunization
GAVI: The Global Alliance for Vaccines and Immunisation
GDP: Gross Domestic Product
GATB: Global Alliance for TB Drug Development
HIPC: Highly Indebted Poor Countries Initiative
HIV: Human Immunodeficiency Virus
IAVI: The International AIDS Vaccine Initiative
IFRC: International Federation of Red Cross and Red Crescent Societies
IMCI: Integrated Management of Childhood Illness
IPPA: The International Partnership against AIDS in Africa
ITN: Insecticide Treated Nets
MEC: Massive Effort Campaign
MMV: Medicines for Malaria Venture
NGO: Nongovernmental Organization
ORT: Oral Rehydration Therapy
PHC: Primary Health Care
RBM: Roll Back Malaria
SEAMEO: The Southeast Asian Ministers of Education Organization
STI: Sexually Transmitted Infections
STB: Stop TB Initiative
TB: Tuberculosis
UN: United Nations
UNAIDS: Joint United Nations Programme on HIV/AIDS
UNDP: United Nations Development Fund
UNESCO: United Nations Educational, Scientific and Cultural Organization
UNICEF: United Nations Children's Fund
UNFPA: United Nations Population Fund
USAID: United States Agency for International Development
WB: World Bank
WHO: World Health Organization

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